The Bristol Medico-Chirurgical Journal.

"Scire est nescire, nisi id me
Scire alius sciret."

MARCH, 1913.

ROBERT SHINGLETON SMITH, M.D., B.Sc., F.R.C.P.

EDITOR, 1892–1912.

THE resignation of the Editor of this *Journal* after twenty years' service is an epoch in its career impelling us to recall the generous devotion, the energy and skill with which it has been piloted throughout this long period, and to look forward in the hope that its interest and usefulness may not suffer in the future.

In accepting this responsible office, the new Editor is grateful for the continued co-operation of his colleagues on the Editorial Committee with whom he has worked for many years as Assistant Editor, thus mitigating his responsibility, while enhancing the honour conferred on him.

The excellent portrait of Dr. Shingleton Smith will afford pleasure to his many friends.

* * * * * *

On Saturday evening, January 18th, a very pleasant gathering of medical men took place at Fortt's Restaurant, at which Dr. Shingleton Smith was entertained at dinner by his old

colleagues and friends, who took the opportunity of his resignation of the Editorship of the *Bristol Medico-Chirurgical Journal* to show their esteem and regard for him, and to make him a presentation in recognition of his services to scientific medicine in Bristol.

Professor Walter C. Swayne, the President of the Bristol Medico-Chirurgical Society, took the chair at the dinner, at which the attendance was thoroughly representative of the local profession, and included nine past Presidents of the Society. After the usual loyal toasts, Professor Swayne called upon Mr. Nelson C. Dobson to propose Dr. Shingleton Smith's health.

Mr. Dobson made a most eloquent and effective speech, as he can always be trusted to do on such occasions, and admirably expressed the respect and regard felt for Dr. Shingleton Smith by his medical brethren. He referred to the founding of the Bristol Medico-Chirurgical Society, which issued on the initiative of Dr. Shingleton Smith, aided by himself and Dr. Spencer, and said that he and Mr. L. M. Griffiths were the other two living members of the original Committee of the Society. Mr. Dobson recalled the untiring activity and energy of Dr. Shingleton Smith in promoting the interests and welfare of the Society, of which he was the first Secretary, an office he held for fourteen years, during which time he was especially active in promoting pathological and microscopical work at the Society's meetings.

He pointed out how much the medical profession owed to Dr. Smith for the establishment of this successful Society, and in many other ways, especially for constant help and kindness to his junior colleagues, and concluded by wishing him long life in which to enjoy the affection of his many friends.

Mr. Richardson Cross then spoke, and said that his first association with Dr. Shingleton Smith was at King's College, London, when Dr. Smith had just finished a brilliant career as a medical student by gaining the gold medal for the M.B. Lond. Mr. Cross mentioned the part played by Dr. Smith in the foundation of University College, Bristol, the forerunner of the University, and that he was Secretary to

the organising Committee of the College. Subsequently he was a most successful teacher in Physiology in the College, first as Lecturer and then as Professor. In 1878 a volume of *Transactions of the Medico-Chirurgical Society* was published, and in 1882 the *Journal* was started with Mr. Greig Smith as Editor and Mr. L. M. Griffiths as Assistant Editor. Mr. Cross mentioned as of particular interest that the first paper in the first volume is a very excellent one by Dr. Shingleton Smith on " Phthisical Contagion," the first of the many able papers for which the *Journal* was subsequently indebted to him, and by which its reputation was enhanced.

In 1892 Mr. Greig Smith resigned the Editorship, and it was felt that Dr. Shingleton Smith by his scientific reputation and his eminent services to the Medico-Chirurgical Society and the *Journal* was marked out for the post. This he undertook with the valuable help of Mr. L. M. Griffiths as Assistant Editor and of a Committee of which the speaker was one of the original members.

He had therefore been Editor for more than twenty years, and under his able guidance the *Journal* had prospered: he leaves it in a stronger position than when he took up his task, and its prosperity is due to the zeal, judgment, and unremitting care which he has devoted to it.

Another benefit which the local profession owed to the foundation of the Medico-Chirurgical Society was the Medical Library, now housed in one of the buildings of the University; this from small beginnings had developed into a fine library, and incidentally owed much to the *Journal*, which has kept it supplied with the large number of medical journals on its exchange list, and has always made over to it the books received for review.

Professor Walter Swayne then on behalf of the subscribers to the testimonial asked Dr. Smith to accept a picture by Reginald Smith, an antique silver salver with a suitable inscription, and an album containing the names of the donors, in token of their recognition of his excellent work as Editor of the *Journal* for so many years.

Dr. Shingleton Smith made a suitable and feeling reply, in which he expressed his appreciation of the gifts, and said that they would always remind him of the cordial and pleasant terms on which he had ever been with the members of the Society and the Committee of the *Journal*, and would be, therefore, an abiding source of gratification to him and to his family.

The rest of the evening was devoted to a smoking concert, in which recitations and songs were given by members of the Society and others, with *inter alia* a most humorous address by Dr. Munro Smith, illustrated by lantern slides, on "Medical Oddities."

Great credit is due to the organisers for the signal success of the evening's entertainment, which they spared no trouble to ensure.

A CASE OF ACUTE SEPTICÆMIA DUE TO THE B. PYOCYANEUS.

BY

J. MICHELL CLARKE, M.A., M.D., LL.D., F.R.C.P.,

Professor of Medicine, University of Bristol; Physician to Bristol General Hospital.

CASES of "cryptogenetic" septicæmia are always of interest, and the B. pyocyaneus is not one of the common organisms in septicæmia, although it has been found more frequently with the improvement of bacteriological methods. Muir and Ritchie state that the B. pyocyaneus is generally found in association with other micro-organisms, but that it has been found lately in some diseases in children as a general infection in pure culture, the chief symptoms being fever, gastro-intestinal disturbances, hemorrhages, petechial or pustular eruptions, and general marasmus. More recently it has been found in many cases in adults as the sole cause of a general infection (septicæmia).

Waite, in a paper[1] in which a full bibliography and account

[1] "Contribution to Study of Pyocyaneous Infections," *J. Infect. Dis.*, 1908, v. 542.

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of published cases to 1908 is given, states that the B. pyocyaneus has been recovered in pure culture from all parts of the body, in local lesions and general systemic infections, and from the blood during life in not a few instances. He states that certain parts of the body are especially apt to be affected, especially the middle ear and the alimentary tract, and that it may be the specific cause of both sporadic and epidemic diarrhœa, and of dysentery. There are several outbreaks of diarrhœa in infants or children recorded as due to this organism, and it may also give rise to acute appendicitis (Kelly).

In an epidemic of dysentery reported by Lartigau,[1] fifteen persons were affected, of whom four died. The B. pyocyaneus was found in the stools, and also in the water of the wells used by the patients, so that in this outbreak the mode of infection seems clear. He points out an important fact in diagnosis, namely that the organism may not produce blue pigment for some days, and perhaps not at all until it has been passed through animals.

The B. pyocyaneus is found occasionally in peritonitis of various origin, in pleurisy, infective endocarditis, in meningitis, in liver abscesses and in cystitis, either alone or with other organisms. It is also sometimes present in cutaneous lesions, where these are either only a local manifestation, or part of a more general infection. In pemphigus, either true or false, it seems especially prone to occur.[2]

Ernst thinks that there are two varieties of B. pyocyaneus, the one producing the chronic the other the acute lesions.

From the published cases children seem to be more susceptible to infection than adults. I pass over the well-known infection of wounds, etc., by this organism. With regard to B. pyocyaneus as a cause of general septicæmia, Waite thinks that the infection may arise from any primary focus, but most frequently from the intestinal tract, and quotes Lannay as to the frequent origin of general pyocyaneus infections from

[1] Quoted by Waite, *loc. cit.*, and by Roberts, *Tr. Coll. Phys. Phil.*, 1905, 3rd Ser., xxvii. 137.

[2] Petges and Bichelonne, *Ann. de Dermat. et de Syph.*, 1908, ix. 417.

primary intestinal lesions, and as to the recovery in such cases of the bacillus from the blood, fæces, mesenteric glands, and ecchymoses of intestinal mucosa.

Charrin and Ehlers each report two cases, in each instance occurring in a brother and sister, of general pyocyaneus septicæmia. In each case the symptoms resembled those of either enteric fever or cerebro-spinal meningitis; one patient died of enteritis; there were vesicular or papular eruptions, which in one case went on to the formation of pustules having a bluish colour.

The account of my case is as follows:—

The patient was a labourer, aged 15. His mother died of pulmonary tuberculosis, and one brother of peritonitis. No previous illness. He had had a slight cough, mostly in the mornings, for several months. No discharge from ears or nose. His work consisted of turning on steam for a steam winch.

On September 7th, 1912, he was suddenly taken with headache, drowsiness and vomiting; there were no rigors. He felt ill, but kept about until September 10th, when he took to his bed, where he remained, and complained chiefly of headache, drowsiness, weakness, and slight cough. There was no return of the initial vomiting, no diarrhœa, no jaundice, no photophobia, no pains in limbs. On admission September 12th patient was weak and drowsy, he lay on his back with his eyes closed, and complained of frontal headache. Pulse 82, regular. Temperature 100°. Respiration 20. Bowels constipated. Tongue furred thickly. Chest: except for the signs of bronchitis, the lungs were normal.

The cardiac apex-beat, area of dulness and sounds were normal. Abdomen slightly retracted and hollow.

Liver dulness normal, edge not felt below ribs. Spleen not enlarged. Urine acid, no albumin or sugar.

The nervous symptoms predominated at this time. He was very drowsy, but sensible; answered when spoken to, and was not delirious.

All reflexes, superficial and deep, were present, and equal on both sides. The cranial nerves were not affected. Pupils normal, acted well. Optic discs normal.

September 14th.—Lumbar puncture showed cerebro-spinal fluid to be under moderate pressure. It was clear and contained a large number of lymphocytes, some epithelioid cells, but no organisms.

September 17th.—He had a distinct rigor. For one or two days after lumbar puncture he had increased headache.

September 19th.—More drowsy. He goes off to sleep directly after feeding; there is photophobia, and he covers his head with the bedclothes, otherwise no change in his condition, and no fresh physical signs of organic disease in nervous system or lungs. The bronchitis continued. Profuse sweats. The case at this stage resembled, clinically, one of meningitis.

September 23rd.—There was distinct jaundice, edge of liver was one inch below the costal margin, splenic dulness was increased, and the tip felt. A systolic murmur appeared over the base of the heart. No hemorrhages or petechiæ into skin. Fresh rigors had occurred. Lumbar puncture. The cerebro-spinal fluid dropped out slowly, it was clear, and contained a few polymorphonuclear cells and no organisms.

September 25th.—On this day Mr. Scott-Williamson made an examination of the blood and stools for the presence of micro-organisms. During this week the patient was extremely ill, deeply jaundiced, restless, and tossing about constantly, especially at night. He was so ill that after this time it was difficult to examine him. He was constantly groaning, which obscured the lung and heart sounds, and during the last few days he could not be turned over to examine the back of his lungs carefully.

He rapidly emaciated, and for some days exhaled a marked cadaveric odour.

On September 30th he was much emaciated and deeply jaundiced. The liver appeared reduced in size, the spleen decidedly enlarged. The urine contained many crystals of calcium carbonate. There were no enlarged glands, and no hemorrhages throughout the illness. The pulse was soft and running. Tongue very dry and furred. No abdominal distension. The motions were very light in colour. There was some dulness at the bases behind, and rhonchi and scattered moist crepitations over both lungs, but his constant groaning interfered with auscultation.

Blood. — Erythrocytes, 2,890,000; leucocytes, 14,000; hæmoglobin, 35 per cent.

Differential count—

Polymorphs	.. .. ..	51.2 per cent.
Transitionals	.. .. ..	1.7 ,,
Small lymphocytes	.. ..	16.5 ,,
Large ,,	.. ..	7.2 ,,
,, mononuclears	.. ..	21.5 ,,
Eosinophils	.. .. ..	1.2 ,,
Basophils	.. .. ..	.2 ,,

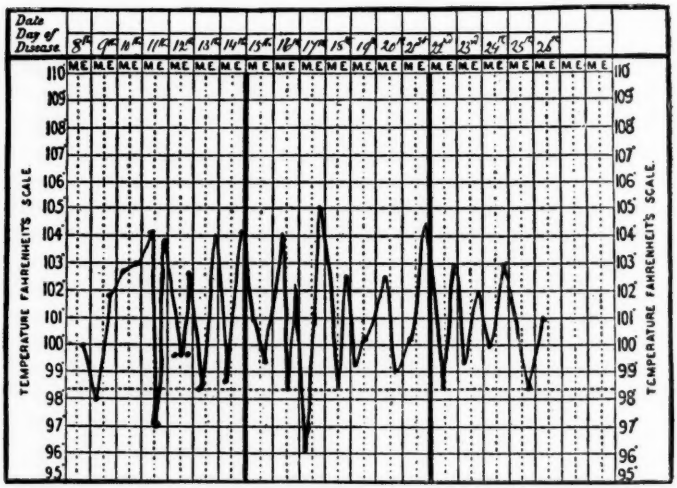
1 normoblast in 400 whites counted.

Urine contained urea, 2 per cent.; a large amount of indican; no leucin or tyrosin; large numbers of acicular

and stellar forms of crystals of calcium phosphates and of crystals of calcium carbonate ; albumin and bile. Fæces showed presence of bile pigment, traces of blood, pus cells, and much mucus.

On October 1st Mr. Scott-Williamson reported that he had recovered the B. pyocyaneus in pure culture from the blood and fæces, and had prepared vaccines. The bacillus agglutinated 1–40 of its own organism, and 1–80 of a stock culture.

He died early on October 2nd, before the vaccines could be utilised.



The *post-mortem* examination was made by Mr. Scott-Williamson. There were pleural and pericardial adhesions. The right pleura contained about twenty ounces of thick greenish-blue, odourless fluid. The left was empty.

Right Lung.—A large abscess communicating with the pleura was found in the posterior part of the lower lobe. There were many small abscesses scattered through this lobe. The abscesses apparently had not originated in connection with the bronchi ; each had a distinct wall, and contained greenish-blue pus.

Left Lung.—Contained many small abscesses, especially in its lower lobe.

In both lungs were scattered small areas of broncho-pneumonic consolidation.

The glands at the root of the lungs were swollen and soft.

Heart.—Slight fatty change in muscular wall (microscopically).

Abdomen.—Peritoneum reddened; its cavity contained no fluid or pus.

Recent adhesions united the upper surface of the liver to the diaphragm.

Liver.—Large and congested, and microscopically showed slight fatty degeneration.

Spleen.—Large and very soft, almost diffluent. The Malpighian bodies stood out prominently. Microscopically there was an excess of polymorphonuclear cells, and active proliferation of lymph nodes.

Kidneys.—Congested, the glomeruli especially so.

Nervous System.—The cerebral meninges were hyperæmic, but not thickened, and there was no purulent exudate. The brain-cortex was injected and somewhat soft.

The B. pyocyaneus was recovered in pure culture from the heart's blood, pleural exudate, and lung abscesses, but not from the spleen or brain.

In this patient, as in the cases of general pyocyaneous infection referred to above, the nervous symptoms predominated during the first part of the illness, recalling the resemblance to cerebro-spinal meningitis remarked upon by other writers. These symptoms were amply explained at the *post-mortem* by the hyperæmia of the meninges and brain-cortex. The lymphocytosis of the cerebro-spinal fluid removed by spinal puncture pointed to meningeal irritation, but the absence of any micro-organisms in the fluid was against an infective cerebro-spinal meningitis. I do not attach great importance in differential diagnosis to severe nervous symptoms in such cases, as they so often dominate the clinical aspect in any acute septicæmia in its early stages. Thus nervous symptoms predominated in two other cases of general infection of unusual origin recently under my care, the one due to a pathogenic leptothrix, and the other to the B. influenzæ. I think that the *post-mortem* appearances do not altogether clear up the source of infection in this case. It may have been from the lungs, in which the chief lesions were found, or from the intestinal tract, as suggested by the occurrence of jaundice. Clinically, signs of bronchitis appeared some days before jaundice, and so far as this goes it points to a

primary lung infection. The more severe lesions of the lung must have occurred during the last week of the patient's life, and were masked by the severity of the general illness.

In conclusion, it is possible that the relative increase of the large mononuclear cells of the blood, in the presence of a slight leucocytosis, is a feature of diagnostic importance. The very peculiar cadaveric odour exhaled from the patient may also be mentioned.

I am much indebted to Mr. Scott-Williamson for the thorough way in which the bacteriological investigation of the disease was worked out.

ALEUCOCYTHÆMIC LEUKÆMIA.

BY

RUPERT WATERHOUSE, M.D. Lond., M.R.C.P.

Physician to the Royal Mineral Water Hospital;
Pathologist and Assistant Physician to the Royal United Hospital, Bath.

THE name leukæmia, and even more so that of leucocythæmia, implies that the very essence of the disease consists in an increase in the number of white cells in the blood. When this increase affects the granular cells, and their precursors, myelocytes, appear in large numbers in the circulation, the condition is known as myelæmia, myelocythæmia, or myeloid, myelogenous, or spleno-medullary leukæmia. When, on the other hand, the increase affects the non-granular cells, the names lymphæmia, lymphocythæmia, or lymphatic leukæmia are applied.

For some time it has been known that in leukæmia, under certain circumstances, the number of leucocytes in the blood may fall to or even below normal. This is seen especially as the result of treatment by X-rays, tuberculin, arsenic, etc., and as the effect of intercurrent diseases, such as influenza, typhoid fever, and septic complications. Cabot[1], indeed, records a case of lymphatic leukæmia in which the number of cells dropped as the result of suppuration occurring in the

cervical glands from 40,000 per cubic millimetre to a tenth of this number, and finally, on the day of death, to the extraordinarily small number of 471 per c.mm.

Speaking generally, it may be said that in lymphatic leukæmia the more chronic the disorder the greater the number of leucocytes in the blood. In chronic cases these cells usually number from one to two hundred thousand per cubic millimetre. It is difficult to name an average for the acute cases since, as Muir [2] points out, many so-called acute cases are in reality merely the acute terminations of chronic ones. There is no doubt, however, that in many of the acute cases the number is quite small. Thus Gulland and Goodall [3] say: "We have several times made the diagnosis with counts as low as 10,000, and once with a count of 6,800, and have seen these cases die with counts of 17,500, 19,000, 20,000, and 25,000."

In the series of cases in children brought before the Royal Society of Medicine in 1908 by Forbes and Langmead [4], the counts were in some instances even lower than this. These writers came to the conclusion that "in the more acute cases (of lymphocythæmia), when the lymphocyte count is highest there is a greater numerical increase both relatively and absolutely of the large lymphocytes than of the small, and at this time death may occur. In the more prolonged cases, as this period is passed there is a marked decline in the total number of lymphocytes, affecting the small lymphocytes relatively less than the large, and the fall may be so considerable as to result in a leucopenia immediately preceding death." That this does not always hold good in adults is shown by one of the cases about to be described, in which a previously low count was followed by a flooding of the blood with lymphocytes just before death, and many similar cases have been recorded which formerly, before the distinction between the histological appearances in leukæmia and in lymphadenoma had been made, led to the supposition that the latter disease might become converted into the former.

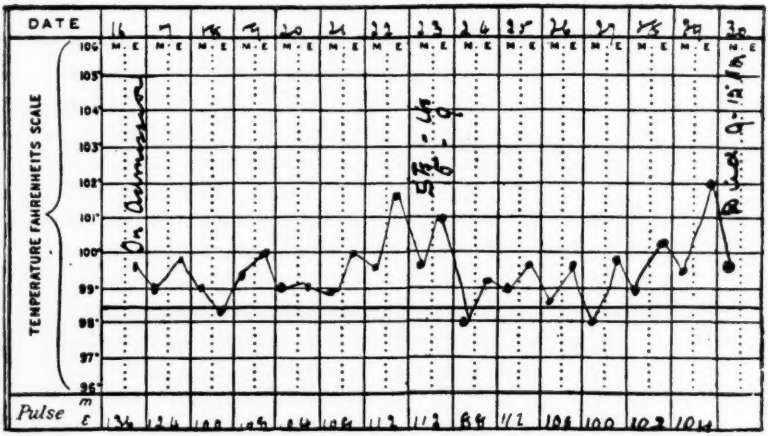
One interesting point about these cases with low counts lies in the difficulty of diagnosis. As a rule, this difficulty is

largely discounted by the presence of the great relative increase of the lymphocytes, which usually number over 90 per cent. As will be seen, however (Case 3), their percentage may at times be considerably less than this. Nevertheless, on the whole, the combination of the clinical symptoms and the blood findings presents a picture which is very characteristic.

Case 1.[1]—A mentally-deficient boy, aged 20, the subject of ichthyosis since birth, in September, 1906, complained of pains in his limbs, which continued, on and off to the time of his death, six months later. In December he had a severe attack of epistaxis. In January, 1907, the glands in the neck enlarged. In February he had another attack of epistaxis, and on March 16th was admitted to the Royal United Hospital under the care of Dr. Bannatyne. He was profoundly anæmic. The glands of the neck, axillae and groins were enlarged, as was also the spleen. Both knee-joints contained fluid. He gradually became weaker, and died somewhat suddenly after a brief period of restlessness and dyspnœa a fortnight after admission.

BLOOD EXAMINATIONS.

1907.	Erythro-cytes.	Erythro-blasts.	Leuco-cytes.	Polymorpho-nuclears.	Lympho-cytes.	Myelo-cytes.
Mar. 17.	1,152,000	—	6,200	—	—	—
Mar. 18.	1,184,000	40	6,000	720	5,240	40
Mar. 26.	1,107,000	12	7,000	606	6,356	12



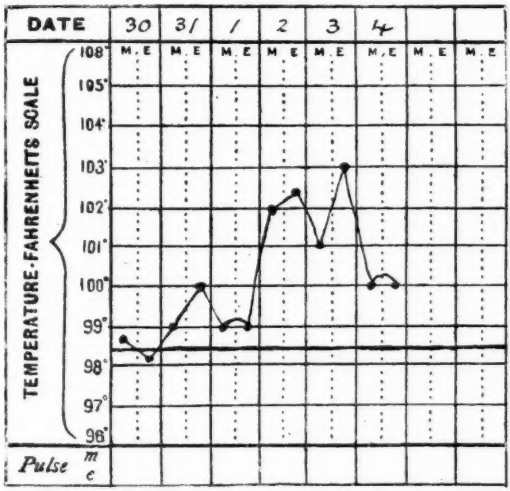
Temperature Chart of Case I.

[1] This case is fully reported in the *Lancet*, 1908, vol. ii. p. 869, and will be only briefly summarised here.

Case 2.—Male, aged one year and eight months. Breast fed, and except for a tendency to bronchitis, healthy up to the age of six months, when it was said to be "rickety." Mother has three other children, all healthy, and has had no miscarriages. Child was always pale. Glands in neck said to be enlarged since eight months old. On October 23rd, 1909, had an attack of epistaxis, and a week later was admitted to the Royal United Hospital under Dr. Bannatyne. Child was profoundly anæmic, but bright and intelligent for its age. Enlarged glands the size of marbles—visible, firm, discrete—could be felt under the angle of the jaw on the right side, and chains of pea-like glands behind either sternomastoid in the axillae and in the groins. The liver was enlarged to the umbilicus, and the spleen could be felt one inch below the ribs. There was a bruise on the left thigh the size of a shilling, and the child had been noticed to bruise very readily. No retinal hemorrhages. Death occurred on November 5th, preceded by restlessness and dyspnœa.

BLOOD EXAMINATIONS.

1909.	Erythro-cytes.	Erythro-blasts.	Hæmo-globin.	Colour Index.	Leuco-cytes.	Poly-morpho-nuclears.	Lympho-cytes.
Oct. 30.	1,333,000	—	—	—	9,800	—	—
Oct. 31.	1,642,000	0	25 %	.83	10,600	800	9,800
Nov. 1.	1,400,000	—	21 %	.75	12,800	—	—
Nov. 3.	960,000	—	18 %	.94	8,600	—	—



Temperature Chart of Case II.

Case 3.—A platelayer, aged 26, was perfectly well until July, 1910, when he began to suffer from symptoms of anæmia, and the glands of his neck swelled. On August 22nd he was admitted to the Royal United Hospital under the care of Dr. Wilson-Smith. He was profoundly anæmic. The axillary glands were the size of peas, those in the groins rather larger, whilst the cervical glands were distinctly enlarged, firm and discrete, the largest the size of a bantam's egg. There were petechiæ on the posterior wall of the pharynx, and especially on the posterior pillars of the fauces, whilst the tonsils, swollen and unhealthy-looking, presented a curious blotchy, plum-coloured appearance. The breath was very fœtid. There were a few petechiæ in the skin of the lower part of the abdomen, and numerous retinal hemorrhages in the neighbourhood of and radiating from both optic discs. There were hæmic murmurs ovei the heart, and the spleen could just be felt below the costal margin. Urine acid 1,015, contained neither albumin nor sugar, but deposited large quantities of uric acid crystals. *August 24th.*—Vomited twice. *August 25th.*—Salol gr. x. t.d. prescribed. *August 27th.*—Daily insufflation of sulphur to the back of the throat begun. *August 30th.*—Lymphatic glands less than half their size on admission. Salol changed to naphthalene tetrachloride, gr. viii. every four hours. *September 6th.*—Striking improvement during the last week in colour and general appearance; glands much smaller; throat practically normal; fœtor of breath gone; spleen has not been palpable since day of admission. *September 8th.*—Had some diarrhœa last night, so insufflation of sulphur discontinued. Spleen distinctly felt to-day. *September 16th.*—Both spleen and glands have gradually increased in size during the last week. *September 17th.*—Severe attack of epistaxis. *September 20th.*—Spleen smaller, but cervical glands much enlarged. More epistaxis; very severe; vomiting semi-digested blood; melæna. Nose plugged. *September 21st.*—Died.

BLOOD EXAMINATIONS.

1910.	Erythro-cytes.	Erythro-blasts.	Hæmo-globin.	Co-lour Index.	Leuco-cytes.	Poly-morpho-nuclears.	Lympho-cytes.	Myelo-cytes.
Aug. 22.	1,573,000	300	—	—	11,300	1,300	10,000	—
Aug. 25.	939,000	400	16 %	.86	4,100	1,940	2,370	—
Aug. 28.	1,027,000	120	18 %	.87	3,000	890	2,130	—
Aug. 31.	1,354,000	150	26 %	.96	3,650	1,850	1,800	—
Sept. 4.	2,876,000	300	45 %	.78	6,740	2,960	3,420	360
Sept. 11.	2,950,000	—	38 %	.64	—	—	—	—
Sept. 19.	1,180,000	—	26 %	1.1	83,000	—	—	—
Sept. 20.	—	None.	—	—	108,000	3,600	104,400	None.

The symptoms common to these three cases may be summarised as follows :—

(1) *Profound anæmia.*

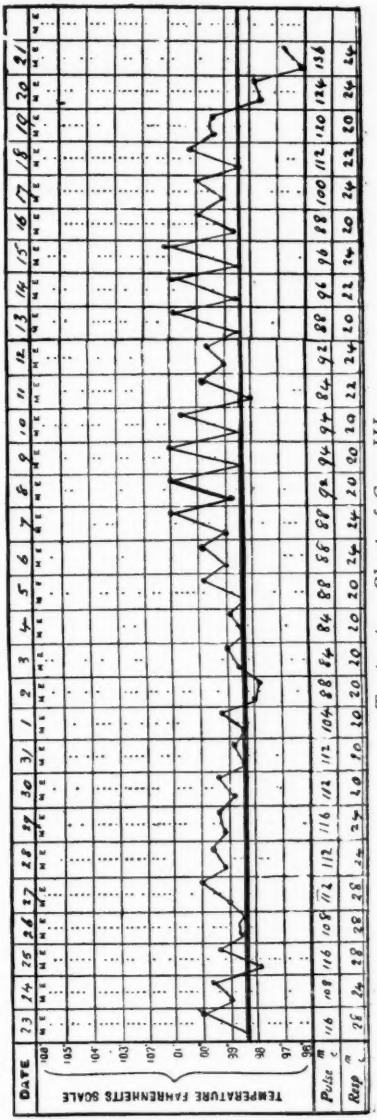
(2) *Hemorrhages,* especially epistaxis.

(3) *Irregular pyrexia.*

(4) *Enlarged glands,* the cervical being specially affected.

(5) *Slight enlargement of the spleen.*

The blood in all cases was pale and watery but clotted rapidly. The red-blood cells numbered about a million and a half, the hæmoglobin being diminished but little more in proportion, so that the colour index was only just below normal. The size of the red-blood cells in any one film sometimes varied a good deal; sometimes, as for instance during the period of improvement in Case 3, but little. Polychromatophilia was common, basophil granulations absent, poikilocytosis never extreme, blood platelets very scanty. Both megaloblasts and normoblasts were present in Cases 1



Temperature Chart of Case III.

and 3, but the commonest nucleated red cell, judged by its size and the staining intensity of its nucleus, was something between the two. Some of these were seen undergoing division, and some extruding their nucleus.

As regards the leucocytes, it will be observed that the count varies between 3,000 and 11,300, except that in Case 3, just before death the blood became crowded with lymphocytes. Basophils (with one or two doubtful exceptions) and eosinophils were absent in all films examined. The polymorphonuclear cells were diminished in number in every instance, and generally very markedly. The nuclei of these generally showed but two or three lobes, seldom four or five. The lymphocytes were generally about normal in number, but were sometimes greatly increased. There was always a relative increase. No attempt has been made to differentiate between the small and the large lymphocytes for the reason that every gradation was met with between typical small and typical large cells, whilst those most frequently encountered were about midway between the two, namely about the size of a polymorphonuclear cell. In all cases these cells were abnormally fragile and readily burst, so that it was much more difficult than usual to obtain satisfactory preparations. Their protoplasm sometimes contained a few azurophil granules. *Post-mortem* examinations in all these cases disclosed lesions typical of lymphatic leukæmia.

The bone marrow of the shafts of the tibiæ was deep red and gelatinous in Cases 2 and 3, and in Case 1 pale pink, with patches of white brain-like deposit and a few small hemorrhages. Films showed lymphocytes and erythrocytes in about equal numbers in all cases. The only other cells seen were a few eosinophil cells (not more than one to a thousand lymphocytes), and in Case 2 a few very large non-granular cells like giant lymphocytes.

The lymphatic glands.—The axillary, the inguinal, and especially the cervical glands, were enlarged in all cases. The mesenteric glands were enlarged in Cases 2 and 3, not in Case 1. The mediastinal and portal glands were enlarged in Case 1,

but are not mentioned in the others. Microscopically all distinction between cortex and medulla was lost, the glands being crowded with lymphocytes.

The thymus was not persistent in Case 1, is not mentioned in Case 3, and in the child (Case 2) was pale, not enlarged, microscopically showed large numbers of Hassall's corpuscles, and appeared normal.

The lungs.—Scattered sub-pleural petechiæ were present in Cases 2 and 3, and in Case 1 the lower lobes were red, congested and gelatinous.

The heart exhibited marked fatty degeneration (thrush's breast heart) in the case of the child. In Case 3 it was of a pale chocolate colour, and showed sub-pericardial petechiæ. None of the cases showed lymphocytic infiltrations microscopically.

The liver weighed 66 ounces in Case 1, 80 ounces in Case 3, and 16 ounces in the child. Every case showed large collections of lymphocytes, resembling those seen in the blood, in the portal spaces. Case 1 gave a fairly well-marked Prussian blue reaction.

The spleen weighed 14 ounces in Case 1, 21 ounces in Case 3, and $1\frac{3}{4}$ ounces in the child. There were small hemorrhages on the surface, and hemorrhages of older date in the substance in Case 3. Microscopically the pulp was packed with lymphocytes. The Malpighian bodies were distinct in Case 2, not in the others.

The kidneys were very pale in all instances, but in Case 3 blotchy from subcapsular hemorrhages. Microscopical changes were very pronounced in all three, consisting of collections of lymphocytes in masses under the capsule and in the cortex, and passing down in the form of strands between the tubules in the medulla. In Case 1 the right kidney was absent, the left weighed 11 ounces. In Case 3 they weighed 15 ounces and 13 ounces respectively.

The adrenals.—In Case 1 the right suprarenal showed a few white patches in the medulla. The medulla of the left was completely transformed into white leukæmic material. The condition of the adrenals in the other cases is not mentioned.

The intestines showed enlargement of the solitary follicles, and lymphocytic infiltrations amongst the crypts, and in Case 3 small hemorrhages.

The thyroid and pancreas were normal, naked eye and microscopically.

The synovial membrane of the knee-joints in Case 1 was soft, thickened and injected, and the synovia was increased in amount. Microscopically, beneath the endothelium was a sharply-defined continuous layer of lymphocytic deposit, rather more than 50 μ in depth. In the deeper layers of the membrane were scattered patches of lymphocytes around the blood vessels.

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NOTES ON A CASE OF ALTERNATING OXALURIA AND PHOSPHATURIA.[1]

BY

F. H. EDGEWORTH, M.D. Cantab., D.Sc. Lond.,

Physician to the Bristol Royal Infirmary, and Professor of Medicine, University of Bristol.

A FEW years ago there came under my care a case of alternating oxaluria and phosphaturia, the causation and treatment of which puzzled me for a long time and which finally admitted of a very simple solution.

The present state of our knowledge of these constituents of the urine is, shortly, as follows: calcium oxalate in the urine is, for the most part, derived from oxalates in the food, especially vegetables and fruit. These are mostly destroyed in the

[1] A paper read at a meeting of the Bristol Medico-Chirurgical Society on January 8th, 1913.

intestine, but a small proportion is absorbed, combines with calcium in the blood and lymph, and is excreted as calcium oxalate. The proportion absorbed is largely dependent on the acidity of the gastric contents. The calcium oxalate of the urine is normally in solution. It is generally thought that acid phosphate of sodium and magnesium salts are some of the factors which help to keep the calcium oxalate in solution, but this is doubtful; for instance, in the case recorded below crystals were only present when the urine became very acid, *i.e.* contained an excess of acid phosphate of sodium, and the administration of magnesium salts had no influence in preventing the occurrence of attacks.

Crystals of calcium oxalate may be present in the urine when it is passed. This may be due to ingestion of large quantities of oxalate-containing food-stuffs, *e.g.* cabbage, rhubarb, or it may be the result of gastric hyperacidity, or due to other causes of which we know little.

Such crystals may be the cause of hæmaturia or of renal colic or of both phenomena, quite apart from the existence of a calculus. It is curious that this—a matter of common knowledge—is not mentioned in many text-books.

Phosphates are deposited only in an alkaline urine—ammonium-magnesium phosphate in cases of ammoniacal fermentation; and earthy phosphates, either the crystalline "stellar" phosphate ($CaHPO_4.2H_2O$) or the amorphous phosphate ($Ca_3P_2O_8$) in cases where the alkalinity is caused by fixed alkalis. The two latter salts are rarely deposited until the urine cools, but exceptionally may be precipitated in the urinary passages, making the urine milky. Such amorphous phosphates rarely aggregate into masses, and hence do not tend to form calculi, and are generally quite unirritating, *e.g.* do not cause hæmaturia or renal colic: in this case, however, they did cause pain of a dull aching character.

The causes of alkalinity of the urine are but little known. One suggested cause is an increased excretion of calcium salts, brought about by a diminished excretion through the intestinal wall, from catarrh or other affection.

With these preliminary remarks, let me relate the case. Three years ago a man came under my care, suffering from right-sided renal colic and hæmaturia. He was 26 years of age, very strongly built, and had had no previous disease of any moment. The attack had set in quite suddenly, without known cause, and the colic was very severe, necessitating the use of morphia. Examination of the very red urine disclosed innumerable red-blood corpuscles and calcium oxalate crystals, but no epithelial casts ; it was very acid in reaction. The colic lasted some hours, and then slowly subsided, leaving the right ureter sore and tender on palpation. The hæmaturia persisted for a day. A week or two later the phenomena recurred. The patient was then put on a milk diet, and as long as this was continued no attacks took place. But this could not be indefinitely continued, and a diet of meat, bread, and water was substituted, as one which contained a minimal quantity of oxalates.

But even on this diet attacks occasionally took place. It was found that the attacks were always heralded and accompanied by an increased acidity of the urine, and a dose of bicarbonate of sodium, taken directly the urine became more acid than usual, sometimes succeeded in checking the onset of an attack.

Another difficulty now occurred, from time to time—sometimes following an overdose of the alkali, sometimes, and more often, quite independently of any such dose—the urine became alkaline in reaction and milky in appearance when passed. This was found to be due to amorphous phosphates. No renal colic or hæmaturia occurred in such attacks, but pain did occur in the course of the right ureter, of a sore, aching character, very different from that attending the passage of oxalates.

The patient was thus between Scylla and Charybdis—if the urine became too acid, oxaluria with right renal colic with or without hæmaturia occurred ; if alkaline, phosphaturia with pain in the right ureter was his lot.

This condition lasted many months, in spite of the

administration of various drugs which have been recommended for these complaints.

At last the difficulty was solved. It was found that neither sort of attacks occurred if he ate slowly and carefully masticated his food, whereas they were liable to do so if he "bolted" it. A week or so later his diet of bread and meat was gradually changed to an ordinary one, still with the same result. During the last two years he has kept well, but for an occasional attack—invariably brought on by insufficient mastication—when his wife, for instance, did not come down to breakfast or went away on a visit.

For the whole of this time he has never had the slightest symptom of dyspepsia or of any intestinal affection.

The case, however, suggests that perhaps insufficient mastication may bring about gastric hyperacidity—though without any gastric symptoms. Possibly, too, it may cause some intestinal catarrh, or defect of intestinal absorption.

I have not found in books any statement of this as a cause of either oxaluria or phosphaturia. Watson remarked that frequently an over-acid state of the urine alternates with one of alkalescence, but he did not associate the condition with insufficient mastication of food, and no later authors so much as mention the subject. That it may be a cause is shown by the case related above, and its discovery gave a happy ending to the constantly occurring pain or discomfort to which he had been a martyr.

A CASE OF ALTERNATING OXALURIA AND PHOSPHATURIA.

BY

C. W. J. BRASHER, M.D., Ch.B. Bristol,

Hon. Medical Registrar, Bristol Royal Infirmary.

IN the preceding paper Professor Edgeworth has recorded an interesting case illustrating this very rare condition, and he has asked me to give details of a similar case also occurring in a male patient.

Mr. Charles M., aged 46, estate agent, a short, stout man who takes no exercise, has been under my care at intervals since 1902.

He is said to have had signs of early phthisis at the age of 20, and went to South Africa for two years. There is no history of gonorrhœa or syphilis. The patient is most erratic in his habits, often working and travelling day and night, taking food at irregular intervals, and either eating heavy meals and drinking stimulants freely and indiscriminately, sometimes to excess, or else subsisting on a diet of bread and milk and soda water.

For more than twenty years he has suffered from intermittent attacks of hæmaturia with much lumbar pain, chiefly on the right side, dysuria and frequently urethritis, but I have never found gonococci in the urethral discharge.

Before an attack of hæmaturia the urine is very acid, scanty, and highly coloured, and always deposits amorphous urates and a large amount of calcium oxalate crystals : during an attack the urine resembles that of a case of acute nephritis, but there are no casts, and the blood corpuscles are mixed with numerous very large " envelope " crystals.

These attacks of oxaluria invariably follow a period of excessive exertion with irregular and indigestible meals, culminating in an attack of acute dyspepsia, with vomiting, frontal headache, and a slight rise of temperature to 100° or 101°.

The heart sounds are normal, but he has considerable emphysema for a man of 46. The blood-pressure varies between 135 and 150 mm.Hg. These attacks of acute dyspepsia and oxaluria are immediately followed by the excretion of a much larger quantity of urine of low specific gravity containing a large amount of amorphous phosphates, so that the urine is, as the patient says, " as white as milk."

This phosphaturia invariably follows the other condition whether the patient takes alkaline medicines or not, but it should be said that he drinks Vichy water when the oxaluria occurs, and during the dyspeptic stage he takes nothing but milk foods and a large quantity of soda water. It seems probable, therefore, that the milk is largely responsible for the presence of an excess of calcium phosphate.

Several medical men have diagnosed renal calculus during these attacks of renal pain and hæmaturia, and on two occasions I have taken him to Mr. James Taylor, but the skiagrams have shown nothing abnormal.

One interesting point which I have observed on several occasions is that as the oxaluria is subsiding the large " envelope " crystals are gradually replaced by crystals of the " dumb-bell " variety ; this may be due to some physical alteration in the urine, such as the presence of an increased

quantity of mucus or an alteration of the calcium-magnesium ratio.

I have seen the patient quite recently, and he tells me that he has had no recurrence of hæmaturia and renal pain for more than a year, probably because he is more careful about his diet—he now avoids port and champagne, and still drinks a considerable quantity of Vichy water; he also informs me that he has not observed any deposit of phosphates.

It is generally admitted that oxalic acid in the urine is chiefly derived from various articles of food, notably cocoa, tea, spinach, rhubarb, and strawberries. In healthy individuals it is probable that food is the only source of oxalic acid.

Rendle Short[1] has proved that the ingestion of rather large quantities of fruit salad and rhubarb will produce a copious deposit of large oxalate crystals and urethral pain on micturition, and that in a case of oxalic acid poisoning the quantity excreted during 24 hours was ten times the normal amount.

Neuberg[2] says, "Klemperer and Tritschler have been able to prove conclusively in numerous cases a fact which had already been emphasised by Fürbringer, that a urine may fail to yield a sediment and yet be relatively rich in oxalic acid, and, conversely, a urine may yield an abnormal sediment and yet be relatively poor in the acid. For the separation of crystals among which may be crystals of calcium carbonate as well as of oxalate (Dunlop) depends less on the absolute amount of the acid than on certain physical and chemical features—the acidity of the urine, the ratio of the bases calcium and magnesium, with which the oxalic acid is combined, to each other, and on the presence of alkalis. That calcium oxalate, itself insoluble, might remain dissolved in urine was formerly referred to the acidity caused by acid sodium phosphate. In reality, according to Klemperer and Tritschler, yet another factor has to be considered, namely the ratio of the lime to the magnesia."

There seems little doubt, however, that in abnormal conditions of the digestive tract endogenous oxalic acid may be produced from carbohydrates, proteids, gelatin, and also from kreatin and kreatinin, as the result of digestive disturbances.

[1] Von Noorden, *Metabolism and Practical Medicine*, i. 148.

[2] *Ibid.*, iii. 1046.

This case suggests that the acute dyspepsia resulted in the production of a large amount of endogenous oxalic acid from the proteids and carbohydrates contained in the food, as well as the increased solution of exogenous oxalates in the highly acid gastric contents.

Unfortunately, I have never had an opportunity of examining the vomit, but the patient says it is intensely acid.

THE INTRAVENOUS ADMINISTRATION OF NEO-SALVARSAN IN SYPHILIS.

BY

J. A. NIXON, M.B. Cantab., F.R.C.P.

Physician and Physician-in-Charge of Skin Department, Bristol Royal Infirmary.

NEO-SALVARSAN is a new derivative of Salvarsan, obtained by Professor Ehrlich by the action of Formaldehyde-Sulphoxylate upon Salvarsan (Dioxydiamidoarsenobenzol). The resultant compound contains as its active constituent Dioxydiamido-arsenobenzol-monomethane-sulphinate of sodium and bears the number " 914 " in Ehrlich's series.

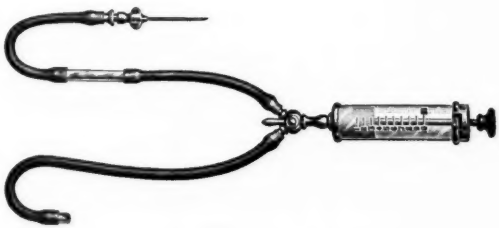
The first great advantage of Neo-Salvarsan over Salvarsan is the ease with which it dissolves in water. Unfortunately, like many other organic arsenical compounds, it is unstable, and readily oxidises, giving rise to products which are exceedingly toxic.

My experience with this drug is short, but I am convinced that it possesses many advantages over the original Salvarsan in the treatment of syphilis. The technique of administration is comparatively simple, but it demands close attention to detail.

Neo-Salvarsan may be given intra-muscularly or intravenously; but the latter is the method with which I propose to deal.

McDonagh's method of using a syringe for intravenous

administration is excellent, and with slight modifications Messrs. Ferris & Co. have made for me a compact injection apparatus, which fits on to an ordinary 20 c.c. Ehrlich-Hata "Record" Syringe. To the nozzle of the syringe a three-way stop-cock is screwed on, the needle of the syringe is connected with one branch of the stop-cock by a piece of rubber tubing about eight inches long, into which a "window" of glass tube is inserted two inches from the needle. To the third branch of the stop-cock a piece of rubber tubing twelve inches long is attached, through which the syringe can be filled from the solution of Neo-Salvarsan. A turn of the tap enables the contents of the syringe to be injected through the needle into the vein.



The preparation of the solution of Neo-Salvarsan is carried out as follows. Into a sterilised beaker is poured, with aseptic precautions, a sufficient quantity of the twice-distilled sterilised water to allow 25 c.c. of water for every 0.1 gramme of Neo-Salvarsan. The twice-distilled water is absolutely essential to avoid a febrile reaction after the injection; and it is advisable to sterilise in an autoclave the water in a flask after re-distillation. The re-distillation and autoclaving should be done not longer than the day before injection. The phial of Neo-Salvarsan is then opened. The neck of the phial is rendered aseptic by wiping with a cotton-wool swab soaked in absolute alcohol, and filed off with a small file sterilised in the flame of a spirit lamp. Heat must not be applied to the phial itself. The contents of the phial, consisting of a finely-divided yellow powder,

is shaken on to the surface of the water, and allowed to dissolve spontaneously without shaking or stirring. If the solution is not perfectly clear at the end of ten minutes, it should not be stirred or filtered; more distilled water should be added. If the water was perfectly clear of all solid particles, there will be no need of filtering: Neo-Salvarsan will dissolve completely, provided sufficient water is added. A turbid solution indicates an insufficiency of water.

A second beaker should be prepared, containing sterilised normal saline solution, made from twice-distilled water. A vein at the bend of the elbow is meanwhile made to distend by placing a rubber tourniquet, secured by artery forceps, round the upper arm, taking care that the radial pulse is not obliterated.

The skin over a wide area is disinfected by swabbing once with Liquor Iodi Fortis (B.P.). The syringe and needle are completely filled with normal saline solution through the spare end of rubber-tubing, and all air bubbles carefully got rid of. The needle is introduced into a conveniently distended vein. It is better to ascertain the whereabouts of the needle's point by gently injecting a little saline solution rather than by attempting to suck up blood into the syringe. If the point is not in the vein, subcutaneous infiltration will immediately be visible as a slight swelling. Provided no such swelling appears, a few c.c. of saline solution should be injected into the vein, and the plunger withdrawn until pure blood is seen in the glass window-tube. This must be immediately re-injected, or clotting may occur in the needle.

Having made sure that the needle is properly introduced into the lumen of the vein, the needle can be kept in position by tying a piece of gauze round the tubing just above the junction with the needle (if gauze is used instead of tape or a bandage a single knot suffices, and will not slip). The tourniquet is then relaxed: a most important preliminary, and one sometimes forgotten. By a turn of the stop-cock the saline solution is emptied out of the syringe, the spare end of tubing placed in the Neo-Salvarsan, and the syringe filled with Neo-

Salvarsan solution. The stop-cock is turned over to the needle, and the solution injected into the vein. This alternate filling with the Neo-Salvarsan and injection into the vein is continued by appropriate reversing of the stop-cock until the whole of the solution is injected. A final syringeful of saline solution should be injected to wash through the whole of the Neo-Salvarsan into the vein, and avoid the possibility of infiltration of the subcutaneous tissues with Neo-Salvarsan on withdrawing the needle.

If the subcutaneous swelling appears during injection, either the needle has become dislodged or the vein has been transfixed. A little saline solution should be injected to dilute the Neo-Salvarsan in the tissues, and a fresh vein must be taken for the remainder of the injection. The pain of subcutaneous injection of Neo-Salvarsan is intense and must be avoided.

At the end of the injection a pad of sterilised gauze is bandaged over the spot, as bleeding sometimes take place. Carried out in this way, the operation should be followed by no reaction and no rise of temperature. Patients prefer the actual injection to be performed as quickly as possible. Using 0.9 grammes of Neo-Salvarsan in 250 c.c. of water, I find the injection may be made in just over five minutes. The solution is injected at room-temperature about 55°–60° F. On a very cold day the flask of water may be warmed by standing in hot water prior to making the solution; but the solution must on no account be warmed after the Neo-Salvarsan has been added. The solution must be freshly prepared at the time of injection, and it must not be carried about or agitated. With these precautions the danger of toxic decomposition products being formed from the Neo-Salvarsan is averted.

Every instrument, towel, swab, etc., to be used at the operation is sterilised by boiling or super-heated steam. Sterilised towels are clipped round the patient's arm, leaving only the iodine-painted area exposed. Sterilised towels are placed under the arm and over a sufficient surface of the table or bed on which the arm rests to ensure that the syringe and

its various attachments may be safely laid down if necessary upon a sterilised surface.

I find it convenient to stand the two beakers of Neo-Salvarsan and saline solution in a double pickle jar stand, so that both may be carried about and handed to me simultaneously. Solid particles or air-bubbles might prove fatal if injected into the vein. Should an air bubble by chance appear at the glass window tube, it must be at once drawn back again into the syringe and allowed to float up to the top. The injection may then be continued. An air bubble of considerable size in the syringe does no harm if the syringe is held perpendicularly, and the plunger is not pushed home at each thrust so as to empty the syringe. Personally, I prefer to keep a fairly large air bubble at the top of the syringe, as small bubbles if they occur in the solution can be more easily dislodged from the sides of the syringe and made to incorporate themselves in the larger bubble, which I watch constantly.

The patients do not, as a rule, experience any unpleasant effects either during or after the injection. Some complain of a slight metallic taste at the end of the injection, but it is quite transitory. Occasionally a slight headache comes on two or three hours afterwards, and I find a cup of tea is the best remedy.

It is advisable to prepare the patients as if for an anæsthetic by administering an aperient on the previous night, and giving a very light breakfast on the morning of the injection. Ordinary meals may be taken after the injection. The patients should remain at rest, preferably in bed, for two hours; if at the end of that time no unpleasant symptoms have occurred, I allow them to get up, provided they remain quiet. The first injection requires greater caution than subsequent ones so far as after treatment is concerned. If the patients stand the first injection well I allow them to get up and go out and about within a few hours after subsequent injections.

The dosage I employ is 0.75 gramme (No. V) for a first injection in a healthy man, with subsequent injections of 0.9 gramme (No. VI), at intervals of three days (in practice

two injections per week), until four or five injections have been given. The Wassermann reaction in an early case of syphilis is usually positive up to four injections; if it is negative a week after the fifth injection I do not repeat the injection unless a later test shows a positive reaction again. If after the fifth injection the reaction is not negative, I give a sixth or seventh injection, with intervals of a week, taking a Wassermann test a week after each injection, and being guided as to a repetition of the dose by its results. I discontinue mercury for at least a fortnight before the first Wassermann test is made, but afterwards combine the treatments. Before finally deciding that no further Neo-Salvarsan is necessary I make a final Wassermann test, preceded by a fortnight without mercury.

Neo-Salvarsan is apparently contra-indicated in alcoholic debilitated subjects, or in those suffering from cirrhosis of the liver. I make it a rule to examine the urine beforehand, ascertaining with particular care that the quantity secreted is normal, that the specific gravity is within healthy limit, and above all that the excretion of urea is sufficient.

A trace of albumen may depend upon the syphilitic infection, but the presence of casts or sugar should in the present state of our knowledge deter us from administering any of the arsenic compounds intravenously. In cases showing signs of any syphilitic involvement of the central nervous system, especially meningitis, spinal symptoms, psychoses, or optic neuritis, great caution should be exercised, and if Neo-Salvarsan is administered at all, the dosage should be very small at the outset.

Observing these precautions, Neo-Salvarsan offers a very valuable adjunct to the mercurial treatment of syphilis. The patient's infectivity is quickly minimised if not abolished, the visible signs of syphilis are speedily dispersed, *e.g.* the chancre, roseola and condylomata may disappear after the second injection. The symptoms are alleviated, and the Wassermann reaction changed from positive to negative, whatever this may really mean.

Time alone can demonstrate whether more solid advantages accrue, but alleviation to this extent is a gain not lightly to be disregarded. At least, Neo-Salvarsan offers the advantages aforesaid, as well as marked benefits in later manifestations, particularly tertiary lesions of the skin and mucous membranes. Some cases of locomotor ataxy and late nervous disorders have been improved.

In addition to these considerations it may be observed that Neo-Salvarsan if cautiously prepared and administered shows little or no toxicity, that it is easily dissolved, requires no elaborate apparatus and is injected at room-temperature. While the use of re-distilled water has proved the "reaction" after intravenous injections to depend more upon some ill-understood quality of the water than upon the drug employed.

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Salvarsan in Syphilis and Allied Diseases, J. E. R. McDonagh. 1912.

AN EXAMPLE OF THE STOKES-ADAMS SYNDROME.

BY

CAREY COOMBS, M.D. Lond., M.R.C.P.,

Assistant Physician to the Bristol General Hospital.

THIS case is reported because of the interesting progress of events, especially in auriculo-ventricular block.

The patient, a maiden lady, aged 84, had rheumatic fever at 18, but no further ill-health apart from osteoarthritis and cataract. About two years before this final illness about to be described she had fallen downstairs in a mysterious and unaccountable way; beyond this there was absolutely no hint of cardiac disease and the pulse was always regular.

About 4 p.m. on the first day of her fatal illness she was suddenly seized with alarming giddiness and fell on the floor. Seen a few minutes later, she was lying on a couch, agitated and

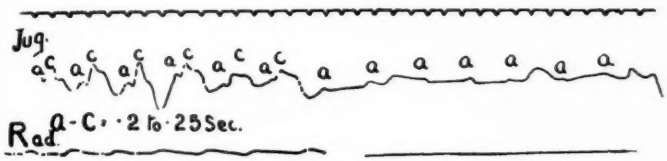
sweating a little, the temperature normal, the pulse 120 and quite regular. She suddenly turned pale, the pulse became very slow (18 per minute) and a brief epileptiform seizure occurred. She was put to bed, and after vomiting twice passed a fairly quiet night. On the following day, when the first tracings were taken, she had attacks all day at brief intervals. The pulse showed paroxysms of irregularity corresponding to the fits.

This was succeeded by two or three days of gradual improvement, the fourth and fifth days being practically free from attacks, so that there was ground for hoping for complete recovery.

However, at 9 a.m. on the sixth day, she was, through a misunderstanding, allowed to get out of bed. The fits began again almost at once, and increased in number till her death in coma on the tenth day. Post-mortem examination was impossible.

The case, therefore, divides itself into three periods. In the first fits were present but decreasing; in the second there were none; in the third there was a progressive increase. The ventricular pauses shown in the tracings underwent a corresponding evolution, to which particular attention will now be drawn.

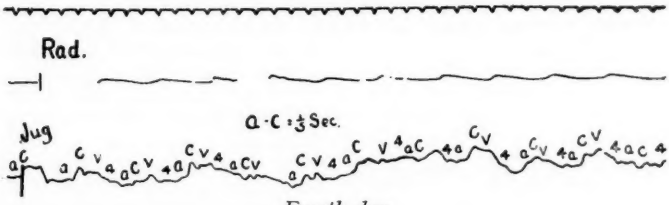
The *first phase* is illustrated by the tracings taken on the



Second day.

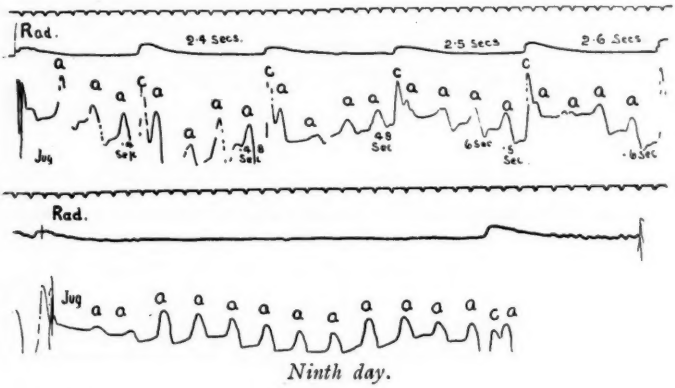
second day. Here a normal or practically normal auriculo-ventricular sequence was suddenly interrupted by a bout of total heart-block, in which the auricle beat at 100 per minute, and the ventricle assumed an independent rhythm at 22—23 per minute. The cessation of this paroxysm was as abrupt as its onset, and the pulse immediately afterwards became normal (a—c = 0.2 second). The third portion of the second-day tracings shows a long ventricular pause; during this the jugular wave shows a regular auricular rhythm, together with other waves which I do not attempt to explain.

The *second phase*, that of quiescence, displays a normal auriculo-ventricular sequence, as the tracings taken on the fourth day show; there is a definite fourth wave.



Fourth day.

The *third phase* of decline is well exemplified by the tracings taken on the ninth day, about twenty-four hours before death.



Ninth day.

At this time the fits were very frequent and the patient was in a continuously stuporose condition.

The upper strip shows a period in which there were four auricular beats to each ventricular systole. An extreme depression of conductivity is to be inferred from the fact that although only 24 to 25 stimuli passed over from auricle to ventricle per minute, even this light task was too much for the conducting system, as the increasing *a*—*c* interval shows (0.4 second, 0.48 second, 0.48 second, 0.5 second, 0.6 second). The lower strip coincided with a minor fit, and shows a ventricular pause of

8 seconds or longer, the auricular beat being regular at about 100 per minute. The longest observed pause (measured with the finger and watch) was about 30 seconds.

The other *signs of cardio-vascular disease* were scanty and relatively trivial. The arteries were thickened and tortuous, the systolic tension at first being 180 mm. Hg. There was no cardiac pain, and (apart from the attacks) no dyspnœa; the ankles were a little swollen when the patient was first seen, but this soon subsided. Two days before death the urine contained albumin, but not before. It was impossible to localise the point of maximum impulse, but the first sound, which was doubled, was heard most clearly external to the left mammary line. The patient being very stout and emphysematous, it was impossible to delimit the deep or superficial cardiac dulness. All over the præcordium, but pre-eminently at the base, there was a long, rough systolic murmur. No sounds were heard during the ventricular pauses, but the jugular beats were visible. Towards the end there were occasional extrasystoles.

The *cerebral symptoms* deserve brief notice. The fits were always produced by a ventricular pause if it attained a duration of five seconds. The sequence in a fully developed attack was as follows: the radial pulse stopped; the patient felt the attack coming, looked alarmed, and said, "I'm going;" her face turned pale, the eyes closed, and she became unconscious and rigid; cyanosis was added to pallor, and mild clonic movements of the whole body occurred, in the face first; the pulse returned, the skin became flushed and moist, and the eyes opened staringly; and she became conscious again, though a little dazed at first. Towards the end the attacks, though more frequent, were less distinct and without muscular convulsion. There were certain *mental* changes; hallucinations, which at first followed the fits at times and later became more frequent, and stupor during the last day or two, deepening eventually to coma. The *respiratory* rhythm underwent variations; at the onset of a fit there was either a heavy sigh or a series of deep breaths; and after a bout of attacks she took many deep "air-hunger" breaths which called the extraordinary muscles into action,

sinking gradually to an interval of almost complete apnœa—a partial Cheyne-Stokes rhythm.

No *drug* was of real value. During the stage of improvement, it is true, atropine was given with ammonium bromide till a physiological effect was seen ; but such amelioration as occurred was due to absolute rest almost as certainly as the fatal relapse was initiated by her unfortunate getting out of bed.

Summary.—The case recorded is one in which various cerebral symptoms were prominent. These are to be referred to anæmia of the brain due to ventricular pauses, which again resulted from auriculo-ventricular heart-block in an arterio-sclerotic subject.

Auriculo-ventricular conductivity varied remarkably ; in the first phase it passed suddenly from the normal to complete dissociation, and as suddenly to the normal again. In the second phase it was continuously normal. The third phase was marked by a continuous and progressive decline in conductivity.

THE END-RESULTS OF CASES OPERATED ON FOR GALLSTONES.[1]

BY

A. RENDLE SHORT, M.D., B.S., B.Sc.Lond., F.R.C.S.,

Assistant Surgeon, Bristol Royal Infirmary ;
Demonstrator of Physiology, University of Bristol.

IT is easy to obtain details as to the findings at operation, the mortality rate, and the condition of the patient a few weeks after any surgical procedure, but reliable figures collected by a disinterested observer, extending over a period of years afterwards, are few and far between, and it would be difficult, if not impossible, to obtain such guidance with reference to the operation for gallstones.

The end-results presented in this paper relate to patients operated on at the Bristol Royal Infirmary from January, 1900, to July, 1911. In most cases the details have been obtained by correspondence ; a small number have been examined

[1] Read at a meeting of the Bath and Bristol Branch of the British Medical Association, held at Bristol on October 30th, 1912.

personally. In every case the operation was performed at least fourteen months ago, and the great majority of the patients have been traced for several years.

It is remarkable how surgical work in this field has increased of late. In three years, 1900–2, seven cases were operated on for gallstones. In three years, 1908–10, the number had grown to forty-three.

Patients in whom a malignant growth was found as well as gallstones have been excluded from the tables.

It has not been the custom to operate at the Bristol Royal Infirmary unless there have been a number of attacks sufficient to lay the patient up frequently, or unless there is a palpable tumour or persistent jaundice. The practice of nine different surgeons is represented.

GENERAL TABLE OF RESULTS.

	Cases.	Died in Hospital	Lost sight of.	Traced.	Cured.	Much better.	Little or no better.	Died since.
I. Stones in gall-bladder only.	42	7	7	28	10	12	4	2
II. Stones in common duct also.	25	3	4	18	12	4	2	0
III. Stones in cystic duct.	12	0	2	10	6	2	2	0
IV. Stones in hepatic duct.	2	0	0	2	1	0	1	0
V. No stones; adhesions, etc.	2	1	1	0	0	0	0	0
VI. Peritonitis present.	2	0	0	2	1	1	0	0
VII. Intestinal obstruction.	1	1	0	0	0	0	0	0
Total ..	86	12	14	60	30	19	9	2
Fever Cases	9	2	0	7	4	1	1	1

Age and Sex.—The findings accord with the general description. Of 86 cases 13 were males and 73 females.

The age table is as follows: Under 20, 1 case; 20 to 30, 3 cases; 30 to 40, 18 cases; 40 to 50, 22 cases; 50 to 60, 27 cases; over 60, 16 cases.

The youngest case was 17, and the oldest 70.

Clinical History and Operation Findings.—It is not proposed to discuss here the symptoms of the various patients. The great majority had suffered from repeated attacks of colic, with jaundice. As a general rule, to which there were exceptions, when the patient was operated on in the presence of jaundice there were stones in the common duct. In one case, however, although jaundice and colic had persisted for two months, no stones were found, but the gall-bladder was shrivelled. This was in 1901; probably nowadays chronic pancreatitis might be recognised in such a case.

A girl aged 27 vomited a gallstone; apart from this the diagnosis would have been gastric ulcer or movable kidney. The gall-bladder was full of stones at the time of operation, but the ducts were not dilated, and no fistulæ were present.

In nine cases there were acute febrile symptoms with pain, tenderness, and "guarding" in the right hypochondrium. In two of these acute general peritonitis was present. They were diagnosed as acute abdominal catastrophes, probably gastric in origin. In one the gall-bladder was found perforated, with a stone inside it; in the other it was large, inflamed, and contained three stones, and no other cause for the peritonitis being found, it was drained. Both patients recovered well.

A woman aged 65 was admitted suffering from intestinal obstruction of fourteen days' duration, with stercoraceous vomiting. On opening the abdomen a stone was found in the small intestine ($3\frac{7}{8}$ by $4\frac{3}{8}$ by $1\frac{3}{8}$ inches). As usual in these cases, there was no history of gallstone colic. She died shortly afterwards.

It is noteworthy that quite a number of the patients stated that they had suffered from catarrhal jaundice in their teens. Three had had enteric fever.

Operation Mortality.—Out of 86 cases 12 died in the Infirmary, but it is not fair to take this as the mortality of ordinary uncomplicated gallstone operations. Deducting the cases in which febrile symptoms and signs of local sepsis were present, and also the fatal case of intestinal obstruction, we are left with nine deaths in 76 cases (about 12 per cent.). This figure is undoubtedly higher than the true average. One patient died suddenly twenty-one days after the operation, and at the autopsy nothing could be found but a fatty heart. Two cases died of gastric ulcer which had not been diagnosed previously. The first, a man of 60, succumbed to profuse hæmatemesis on the sixteenth day, and at the autopsy an ulcer was found opening an artery. In this patient the portal vein had been punctured at the operation, and the hole closed, but the vein appears to have been normal at the *post-mortem*. The other case, a man of 31, died of perforated gastric ulcer on the ninth day.

In another patient, a woman, the portal vein was opened and bled furiously, so that nothing could be done but apply large forceps and tie off in the dark; she died a few hours later, and at the autopsy the vein was found to be pulled by the abundant adhesions right in front of the bile-duct, so that it would have been very difficult to avoid the catastrophe.

In most published figures (*e.g.* the Mayos') the mortality of common duct cases is much higher than that for stones in the gall-bladder only, but this is not so in our figures, the preponderance being, strange to say, in the other direction. Our mortality (two out of nine) in febrile cases is, naturally, above the average for afebrile cases.

Adhesions complicate the operation seriously. Out of nineteen cases in which abundant adhesions are mentioned in the notes, six died in the institution (about 30 per cent.).

The causes of death were as follows: Shock, 3 cases; sepsis or peritonitis, 3 cases; gastric ulcer, perforated, 1 case (nine days after); gastric ulcer, bleeding, 1 case (sixteen days after); fatty heart, 1 case (twenty-one days after); pneumonia, 1 case; cut portal vein, 1 case; intestinal obstruction, 1 case.

The End-results.—Of seventy-four surviving patients, fourteen have been lost sight of, and sixty traced from fourteen months up to ten years after the operation.

Taking these all together, thirty describe themselves as perfectly cured, with no symptoms at all relating to gall-stones. When one remembers that this refers to middle-aged and usually corpulent working-class women, it will be admitted that it is a remarkably good result. Another nineteen patients are described as much better, meaning that there has been slight pain occasionally, but on the whole very great improvement; three classed here have had no further gallstone trouble, but suffer from incisional hernia. None of the cases in this group have asked for further treatment. Thus it will be seen that forty-nine out of sixty patients are very greatly relieved by the operation (82 per cent.).

In 9 out of 59 cases there has been but little relief. In one of these a stone was lost and knowingly left in the hepatic duct. Four cases had a second operation. In three of these nothing was found but adhesions; in the fourth there was a stone in the gall-bladder, but as there were a great number present at the original operation it is quite possible that this was not a new formation. Except in this doubtful case, the drainage of the gall-bladder would seem to have cured the catarrh which allows fresh stones to form. Recurrence of the pain is probably due in most instances to adhesions. Second operation did not bring much relief in any of these four patients, although the adhesions were divided.

Two patients have died since leaving. One died a month afterwards, but details are lacking. The other was quite cured of her gallstone trouble, but was operated on a year later for sarcoma of the pelvis, which proved to be irremovable.

There is not much difference in the end-results according to whether the stone is in the gall-bladder, common duct or cystic duct, except that adhesions are commoner with the first of these, and therefore absolute cures are less frequent. The extent of the adhesions is the principal factor in determining both the immediate and the ultimate result. It has been

mentioned that out of 19 cases with extensive adhesions 6 died; of 11 whose after-history is known 3 are quite cured, 4 much improved, and 4 little or no better. The failures in the absence of adhesions are only 10 per cent.; when they are present the failures amount to 36 per cent.

The usual operation has been to remove the stones and to drain the gall-bladder, and common duct as well in some cases. If the gall-bladder was extensively diseased it was removed. The results in these ten patients, treated by cholecystectomy, were not so good, but the figures are small, and relate to the severer type of cases. Three died, three are lost sight of, and of four followed throughout three are practically cured; but one, operated on in 1910, has had two or three severe attacks of pain, with jaundice since. It would appear as if the stones have reformed in the hepatic ducts.

In a patient in whom the gall-bladder was found distended with turbid fluid and drained in 1902, there has been no return of symptoms, but since 1910 she has been suffering from diabetes, possibly due to an ascending infection of the pancreatic as well as of the bile-duct.

In two or three cases there was a single attack of gallstone colic a week or two after the operation, but none whatever since, even over a long period of years. Possibly one small stone was overlooked, or there may have been an attempt to expel blood-clot.

Although it is well known that cancer may supervene upon gallstones, several instances having occurred in the Infirmary of both being found together at the operation, it is perhaps worthy of note that in none of our 60 cases, followed for more than a year, has cancer developed so far. The argument for cholecystectomy to avoid malignant disease is therefore not very strong.

Summary.

1. Of 86 patients operated on for gallstones 12 died, but the mortality in ordinary and febrile cases was 12 per cent. Unlike most statistics, the mortality was higher in removals of the stone from the gall-bladder than from the common duct.

2. Of 60 patients followed through for more than a year, about 82 per cent. are quite cured, or very greatly improved. Failure is usually due to adhesions, not to recurrence of the stone formation.

3. Where adhesions were found to be extensive, 6 out of 19 died. Of those traced, 4 out of 11 were but little improved (36 per cent. failures). Apart from adhesions, there were only 10 per cent. failures.

4. According to our figures, of 100 ordinary afebrile cases operated on, 12 died, 75 are greatly improved or quite cured, and 13 are not much bettered.

5. Cases are related of intestinal obstruction by a gallstone, vomiting a stone, injury of the portal vein, general peritonitis due to gallstones, deaths from perforating gastric ulcer, and from hæmatemesis caused by a gastric ulcer soon after operation for gallstones, and diabetes supervening long afterwards.

THE TREATMENT OF CHRONIC CONSTIPATION.

A DISCUSSION AT THE BRISTOL MEDICO-CHIRURGICAL SOCIETY, FEBRUARY 12TH, 1913.

INTRODUCED BY

F. H. EDGEWORTH, M.D. Cantab., D.Sc. Lond.

THE contents of the small intestine are fluid in character, travel rapidly through the 22 feet of its length, and begin to issue through the ileo-cæcal valve within four to five hours of a meal. They travel through the large intestine far more slowly, reaching the hepatic flexure in six and a half hours, the splenic flexure in nine hours, and the pelvic colon in about eighteen hours—in a semi-solid condition owing to the absorption of water. Here the fæces are stored, losing still more water, until defæcation takes place. This reflex act, started by the entry of fæces into the rectum, and aided by voluntary

contraction of the abdominal wall, empties the colon from the splenic flexure downwards.

The fæces chiefly consist of water (65%), cellulose and bacteria. Most of the proteid, fat, and sugar of the food is absorbed. The bulk of the fæces—on which so largely peristalsis depends—is mainly due to the, mostly undestroyed cellulose of the vegetable constituents of the food.

By constipation is understood a delay in the passage of the intestinal contents through the large intestine; and it is convenient (following Hertz) to divide such cases into those in which delay occurs proximal to the pelvic colon, and those in which defæcation is defective. There is no good word to signify the former class of case, the latter is termed dyschezia. The occurrence of delay is easily ascertained by the administration of charcoal biscuits—the fæces are normally blackened within forty hours.

Ordinary constipation—in which delay takes place above the pelvic colon—may be due to one or more of many causes, *e.g.* to weakness of the intestinal wall as in old age, or to relative weakness when the fæces are hard and dry—when too little fluid is taken or too much absorbed, as in diabetes; or it may be the result of insufficient mechanical and chemical stimulation of the intestinal wall, due either to absolute insufficiency of the food or—much more commonly—to a relative insufficiency of its cellulose contents. This creates a vicious circle—the deficiency in water or cellulose lessens the bulk of the food residues and slows their passage, so that a still greater quantity of water is absorbed, with resultant delay and difficulty in transit. Or reflexes may not occur, *e.g.* when the mucous membrane is damaged by an attack of diarrhœa, or when the nervous centres are inactive, as in neurasthenia and melancholia, or inhibited by some peripheral irritation, as by an inflamed ovary. The lumen of the bowel may be narrowed by localised spasm of its muscular coat. If this is acute the condition is generally mistaken for intestinal obstruction, if more chronic and less intense it may be recognised by discovery of contracted lengths of tender intestine which vary from day to day. The

lumen may be narrowed by a new growth, not far enough advanced to give rise to intestinal obstruction with its attendant symptoms and physical signs. Such neoplasms, especially when they occur at the hepatic or splenic flexures, may cause the greatest difficulty in diagnosis in the initial stages. According to some authorities, peritoneal adhesions may narrow the lumen of the large intestine to a degree sufficient to cause constipation —as distinguished from obstruction. It is, however, unwise to suggest any operative interference unless skiagraphy after bismuth meals shows some positive localised delay in the passage of the intestinal contents.

If causes necessitating operation can be excluded, the following are the best means of treating the condition. Sufficient water should be taken. The supply of cellulose-containing articles of food should be augmented. Of these the most important are porridge, wholemeal bread, and cooked vegetables of all sorts. Fruits are apt to cause colic unless taken at the conclusion of a meal. Bananas are useless, owing to the small percentage of cellulose.

Of drugs the following are of use. Salines are most useful if the blood-pressure is high, if low they cause too much depression. In the former condition it will be found that salines not only act as purgatives but are most efficient vaso-dilators. Mercurials should not be given as a regular aperient in chronic constipation, and never if nephritis is present; in the latter condition one 5-grain dose of blue pill may set up severe ulcerative stomatitis. The only condition in which calomel is useful as a regular aperient is typhoid fever with constipation. Cascara is an excellent aperient, though a little apt to lose in efficiency in the course of months; it is best given in a pill; the liquid extract is very bitter. Aloin is probably the best aperient in chronic constipation, for it will be generally found that the dose can be gradually diminished. This is specially the case when pills containing only $\frac{1}{4}$-grain of aloin are given —the patient takes the necessary number (3—8) to produce one non-fluid action each day or every other day, and lessens the dose by one pill if more than one action or a fluid action results.

Senna is apt to cause colic. Rhubarb and castor oil act well, but their effects are followed by increased constipation; rhubarb, however, is a most useful drug for children with capricious appetites, with or without constipation; and castor oil is invaluable in the treatment of membranous colitis—in doses of half to one ounce every morning. I have had no experience with purgen, though some of my friends speak highly of it. Podophyllin may be employed alone in children with hard clayey stools, and may be added to any of the above purgatives if patients are dull and depressed or have a metallic taste in the mouth in the morning. Sulphur—5 grains in a lozenge—has the effect of keeping the motions soft, and is particularly good in old people: some, however, cannot take it owing to its causing offensive breath. Liquid paraffin has come into use during the last few years, in doses of half to one ounce once or twice a day; it is a most efficient laxative; for children it may be mixed with a little glycerine and a drop of peppermint oil; there is no advantage in ordering an emulsion. Agar-agar is also very good, it absorbs water and so prevents the motions becoming hard; it may be given in tablespoonful doses once a day, ground up in a coffee mill. Regulin (agar-agar mixed with cascara) presents no advantages over agar-agar, and is very nasty.

In spastic constipation ordinary purgatives do not act, and make the pain worse; they should be mixed with belladonna, or the latter drug given alone. This has the power of relaxing involuntary muscle, and so relieves the condition and acts as a laxative.

I now pass on to the other great variety of constipation, that of dyschezia, in which there is either difficulty or inability to empty the pelvic colon in defæcation. The condition is easily recognised—if the rectum be examined after defæcation has taken place it will be found to be full of fæces. At the same time the pelvic colon—examined through the anterior rectal wall—is found full, a sausage-like, indentible mass. The iliac colon, too, is often found full, and sometimes tender on pressure. The condition may be brought about in many ways. It may follow on ordinary constipation owing to the

slowly-moving fæces becoming dry and hard. It often results from the pernicious habit of disobeying natural calls to stool, whereby the sensitiveness of the rectal mucous membrane is impaired or lost, and the normal reflex act set up by entry of fæces from the pelvic colon into the rectum does not occur; or there may be some narrowing of the rectum, either functional or organic in nature. Thus, an anal fissure or inflamed piles may make defæcation painful and bring about postponement of the act; or cancer may narrow the passage. Statistics show that four-fifths of all cases of cancer of the large intestine occur in the pelvic colon or rectum; and the only good rule to observe is that if a middle-aged or elderly person, without change of habits, begins to suffer from constipation or diarrhœa, a careful examination should be made, both by finger and sigmoidoscope. Apart from such cases the main cause of dyschezia is weakness of the abdominal wall, a most common cause in middle-aged women of the poorer class who have had many children, and in whom no attempt has been made by exercises after childbirth to restore its integrity. The voluntary contraction of the abdominal wall in defæcation is consequently inefficient, and the pelvic colon and rectum are incompletely evacuated. Such cases are also frequently the subjects of visceroptosis—an associated, not a causal, condition of the dyschezia.

The treatment of dyschezia, if not due to a surgical cause, is by enemata—purgatives are useless. At the same time regular habits of soliciting an action of the bowels should be inculcated. If the cause be weakness of the abdominal walls, these should be strengthened by massage and afterwards by voluntary exercise—" heads and tails " are excellent; in many cases, however, the abdominal wall is damaged beyond repair, and then a well-fitting abdominal belt should be worn. The motions should be kept soft by sulphur, paraffin, or agar-agar.

DISCUSSION.

Mr. T. CARWARDINE discussed the causation and effect of adhesions which led to constipation. He alluded to the effect

of chronic appendicitis. He had met with adhesions binding the terminal part of the ileum to the pelvic wall and cured them by separating the adhesions. One case he had found to be due to a retro-colic hernia. Those present who had treated cases by short-circuiting or colectomy were asked to relate their experiences.

Mr. F. G. BERGIN emphasised the advantages obtainable by skiagraphy after bismuth meals. The help given in locating the nature of intestinal stasis by this method was enormous. The physicians and surgeons should themselves examine the cases with the screen. Skiagrams gave much less information than careful and prolonged watching with the screen. Cases illustrating the value of this method were reported.

Dr. BERTRAM ROGERS discussed constipation as it affected infants and children. In such patients regular habits had not been acquired. Training should be given when possible. He considered cascara a good remedy, and the taste could easily be concealed with liquorice.

Dr. MICHELL CLARKE said that the causes of constipation had been so fully and ably dealt with by the opener of the discussion that he should say very little on this head. The first steps in diagnosis must be to eliminate any general disease which might be the cause of constipation. The examination of a patient at any age suffering from constipation must include an examination of the rectum. This might seem too obvious for mention, were it not that in his experience it was often omitted, and sometimes with disastrous result from the overlooking thereby of some disease of the rectum or pelvis.

The large majority of cases of constipation were in women, and increasing experience had taught him that the most frequent cause was neglect of the call to defæcate, either from shyness, carelessness, or undue haste, in girls of the school age. Too much importance could not be attached to sufficient provision being made and time allowed for a morning evacuation of the bowels in girls and boys at school. History of cases of long-standing constipation in adults generally showed that the condition dated from this period of life, and it was not un-

common to obtain a further history of attacks of abdominal pain, sometimes severe and lasting for days, between the ages of eight and seventeen, which might be reasonably attributed to inflammatory lesions around the cæcum or in the appendix, and resulting in the formation of adhesions in this region.

Further, although exercise was undoubtedly a preventive of constipation, yet the present strenuous routine of life at school and subsequently at college, in which every hour of the day was occupied by brain work or games, and in which also the hours of sleep were often too short, might lead to nervous exhaustion and through this to constipation. Certainly some of the most obstinate cases of constipation he had had to treat occurred in youths and girls distinguished in athletic games. He fully endorsed all that Mr. Bergin had said as to the value of the X-rays with a bismuth meal in the diagnosis of constipation.

For the treatment of the ordinary case, arising from former neglect of the normal call to defæcation, the first point was to correct the diet, especially in the matter of taking sufficient water, fats, green vegetables and fruits. A glass of hot water should be taken on rising and going to bed. In all these food-stuffs the diet was apt to be insufficient, whilst there was an excess of tea and sweet-stuffs. The next was to get rid of drugs: these patients were generally addicted to taking the much advertised purgatives. It was, however, generally necessary to begiu treatment by an aperient of some kind, and perhaps one of the most useful was a pill of iron, aloes, nux vomica and belladonna given two or three times a day, the dose of which could be gradually reduced, and finally left off. One of the preparations of petroleum was a useful adjunct. Other measures were to insist on the patient's going to stool daily at a fixed hour by the clock, to see that the seat of the w.c. was not too high, and the carrying out of exercises which strengthen the abdominal muscles, as well as regular daily exercise in the open air for those leading a sedentary life.

The more severe cases, which were so often associated with neurasthenia, and in which constipation was due to nervous exhaustion, might generally be cured by a course of treatment

in a nursing home, with a very full diet, rich in fats, green vegetables, fruit, etc., abdominal massage, the application of (sinusoidal), electrical currents, over the course of the colon, together with rest in bed at first, and suitable exercises during the latter part of the cure. Treatment must be initiated by a thorough cleaning out of the large bowel by large enemata of oil followed by soap and water. It was important to remember that when once enemata of this kind were begun they must be carried out completely, otherwise toxic absorption might occur, of which there was little danger so long as the accumulated fæces were undisturbed, for the body was well protected against this. Small enemata of cold water were useful subsequently, and seemed to stimulate the bowel. Very severe and long-standing constipation could be cured by such a course of treatment. Stercoral ulcers were in his experience rare, but were probably best treated by emptying the bowels and putting the patient on a full and nutritious diet.

Cases in which the symptoms pointed to adhesions around the cæcum or to chronic lesions of appendix would require surgical treatment.

Visceroptosis was a most important and not uncommon cause of constipation, and one often very difficult to treat; where medical measures after a full trial had failed, and in those cases in which the colon formed a large V-shaped loop descending to the pelvis the operation for short-circuiting the large bowel should be tried.

A dilated and dropped stomach might be present alone, and in such cases constipation was the rule, due to the very defective absorption of water: treatment directed to the stomach condition would be most likely to cure the constipation.

Lastly, no form of treatment would be permanently successful unless the patient afterwards paid careful attention to getting an action of the bowels at a fixed time every day and kept to a suitable diet.

Mr. J. Lacy Firth related an experience of surgical intervention for the cure of constipation in a woman of about 24 years of age. Prolonged medical treatment had failed. First

appendicostomy had been performed in the hope of improving matters by washing out the colon. Some months later ileo-sigmoidostomy with division of the ileum below the anastomosis was performed, and the appendicostomy opening was still utilised for irrigation. The patient returned home, but after some months came back to hospital with the appendix-opening closed and the colon and cæcum full of impacted fæces. Finally, the entire colon down to near the sigmoid was removed. The patient was much better when last heard of some three months after the operation.

Mr. LANSDOWN emphasised the importance of rectal examination. He had been asked to operate upon cases in which such examination had been omitted, and when the cause of obstruction was a loaded rectum. If short-circuiting was done the anastomosis should be into the beginning of the rectum, not into the pelvic colon, otherwise the latter would act as a cesspool. He mentioned a case in which the cause of obstruction had proved to be a kink at the junction of the pelvic colon with the rectum. The bowel was washed out by means of a long tube for over an hour with the abdominal wound still open, and then the sigmoid attached to the anterior abdominal wall. There had been no trouble since.

The PRESIDENT reminded members that German rye bread was procurable in Bristol, and was a useful article of diet in constipation. Garlic and agar-agar he could also recommend.

Progress of the Medical Sciences.

MEDICINE.

Suprarenals and Blood Pressure. Anrep[1] shows experimentally that stimulation of the splanchnic nerves gives a rise of blood-pressure. The curve of the rise of blood-pressure takes place in two phases; the second phase is the larger, and is accompanied by a simultaneous and marked acceleration of the heart-beat. The extent of this acceleration depends upon the pulse-rate obtaining before stimulation of the

[1] *J. Physiol.*, 1912, xlv. 307.

splanchnics; if this were already fast, the acceleration was much less marked. This second phase is also accompanied by a constriction of all the peripheral blood-vessels. Both effects, on the heart and vessels, are due to an increased output of adrenalin into the blood-stream, and are absent on splanchnic stimulation if the suprarenals have been previously extirpated. The same effects take place if the heart or an organ or the vessels of a limb have been denervated.

Further, during the secondary phase there are an increased tone and augmentation of the heart, which is also due to the action of adrenalin on this organ. The author observes that the splanchnic, being the great vasomotor nerve to the body through which the central nervous system regulates the blood-pressure, every change in nervous or muscular activity is probably associated with corresponding changes in the impulses descending the splanchnic nerves and playing on the vascular system. In all these reactions there is a mixture of effects, some due to the direct influence of nerves on the heart and blood-vessels, others to the action of adrenalin set free by the action of the splanchnic nerves on the suprarenal glands. He concludes that every rise of blood-pressure brought about by the agency of the nervous system thus involves the co-operation of the chemical mechanism represented by the suprarenal glands.

Local vascular reactions.—In a second paper Anrep[1] discusses the constriction of the blood-vessels obtained in denervated limbs during the rise of blood-pressure produced by splanchnic stimulation. This was regarded by Bayliss as evidence of the existence of a power of local reaction of the blood-vessels to variations of the internal pressure upon their walls. The author shows that all such effects are in reality due to the production of adrenalin (the secretion of which was increased under the conditions of the experiments) and its passage into the circulation, and that a local form of reaction of the walls of the blood-vessels to changes of tension is as yet unproven. The importance of these researches lies in the evidence of a *chemical* production of changes of blood-pressure, both local and general, and they should be read in connection with Elliott's paper[2] on the secretion of adrenalin which results from stimulation of the splanchnic nerves either electrically or through the ordinary paths of the central nervous system by emotion, etc.

Hexamethylenamin in the treatment of system infections, and as a prophylatic.—Crowe[3] believes that hexamethylenamin is valuable both as a therapeutic and a prophylactic agent,

[1] *Ibid.*, p. 318. [2] *J. Physiol.*, 1912, xliv. 374.
[3] *Johns Hopkins Hosp. Bull.*, 1912, xxiii. 255.

and from experimental and clinical observations he advocates its use in systemic infections. It is indicated in infections (1) of the genito-urinary tract and typhoid bacilluria; (2) of the gall-bladder and bile-ducts; (3) of the respiratory tract, including the ears and nasal sinuses, acute tonsillitis, and some forms of bronchitis (whether it is of value in pneumonia and pulmonary tuberculosis is doubtful); (4) in acute poliomyelitis, epidemic meningitis, and meningeal infections secondary to injuries or infectious processes elsewhere. In the Johns Hopkins Hospital it has been given as a routine treatment in all cases in which there is reason to fear a meningeal infection. In cases of compound fracture of the skull he gives evidence to show that the mortality from secondary infection has been reduced since this measure was adopted. Hexamethylenamin has been given in doses of from 40 to 60 grains during the twenty-four hours preceding operation in forty cases of tumour of the hypophysis. When given either by mouth or rectum it appears in the bile and urine almost simultaneously. If the drug is given in a dose of 75 grains daily the amount in the gall-bladder is sufficient to render the bile an unsuitable medium for the growth of bacteria. In administration 2 to 3 grains of hexamethylenamin are added to every ounce of liquid taken, and in this way 60–100 grains may often be given in the twenty-four hours without the patient's knowledge, and without causing any irritation of the stomach or kidneys. In patients who are very ill it may be given per rectum, 50–100 grains to a litre of normal saline solution, allowed to flow into the bowel a drop at a time. Although as much as from 200–300 grains daily for four or five days were given in some cases, in very few were toxic symptoms produced. 100–125 grains daily were administered to children without ill effects. Pain in micturition and hæmaturia occurred in a very few cases: three of these were cases of severe meningeal infection, to whom the drug was given in very large doses. *Post-mortem* it was found that the hæmaturia was of vesical, and not of renal origin. The drug should be given freely diluted. Some few persons show an idiosyncrasy to it, even in small doses, in the form of gastric or urinary irritation, or of skin eruptions.

Catarrhal Jaundice, Sporadic and Epidemic.—Cockayne[1] distinguishes two forms of epidemic jaundice, whilst admitting that this distinction is not recognised by some authorities. The first, generally known as Weil's disease, or infectious jaundice, is the more severe and the rarer. It is probably endemic round the shores of the Mediterranean, and milder epidemics have occurred in France, Italy, Germany, and Russia.

[1] *Quart. J. Med.*, 1912–13, vi. 1.

It is probably due to the ingestion of contaminated water or food, but may be due to some biting insect. Primarily it only affects the lowest classes, and is essentially a filth disease.

The B. proteus fluorescens appears to have been the exciting cause in some cases. After an incubation period of two days there is a sudden onset with rigor and high fever; jaundice appears on the third or fourth day, with enlargement of liver and spleen, and nervous symptoms; and from the seventh to the ninth day a remarkable urinary crisis (polyuria and azoturia) with cutaneous petechial hemorrhages are common; other hemorrhages may occur. The mortality varies from 10 per cent. to 60 per cent. in different outbreaks.

The second form, with which the paper chiefly deals, and which the author calls true epidemic catarrhal jaundice, is a milder disease of almost world-wide distribution, and comprises most recorded epidemics of jaundice. There is strong evidence that, unlike Weil's disease, it is air-borne, and is not spread by food or water. The incubation period is from four to ten days, or longer. It is almost certain that the patient has ceased to be infectious when the jaundice appears. There are two main types: (1) Without constitutional symptoms and often without fever, the first sign of illness being jaundice; and (2) with a definite prodromal period, with fever lasting from four to fourteen days before jaundice appears. In most epidemics both types are seen, but in some one only may be present. In the febrile cases there is occasionally a rigor, fever is not as a rule high, and a high temperature does not always connote a severe attack. The liver is always tender, and generally swollen. The spleen may or may not be enlarged. Relapse may occur, but is uncommon; relapsing cases are much more fatal. Convalescence is often slow, weakness being out of proportion to the severity of the symptoms. Deaths are very unusual.

An interesting point is the association of epidemics of jaundice with outbreaks of enteric fever and influenza, especially with the latter: the author thinks this association is accidental. Rolleston considers some cases of sporadic catarrhal jaundice to be of the same nature as the epidemic form, but only includes the febrile cases. In favour of this is the similarity in geographical range, age, and seasonal incidence. Children form nearly half the cases

Little is known of the pathology. In the few fatal cases examined death has been accidental, or due to some other disease.

The relation to acute yellow atrophy of the liver is important; the author brings forward evidence to show the connection between the two. Perhaps the most striking facts are the close resemblance between the early signs and symptoms in acute yellow atrophy and epidemic jaundice, and that in

certain epidemics of jaundice in which pregnant women were attacked some of them died of acute yellow atrophy. In such cases he thinks that the additional strain thrown upon the liver by the specific organism of catarrhal jaundice at a time when it was already weakened by the changes incidental to pregnancy proved fatal, though, acting alone, neither pregnancy nor jaundice would have caused such an untoward result. He thinks that sporadic and epidemic catarrhal jaundice and acute yellow atrophy are due in the great majority of cases to the same cause, a specific organism of unknown nature, and suggests the name of "infective hepatitis" as a more accurate one than catarrhal jaundice.

In a paper on **Epidemic Catarrhal Jaundice**[1] Dr. L. Guthrie described ten cases which occurred at the end of 1911, and drew attention to the following points: (1) That mild epidemics have been especially prevalent in this country during the last three years; (2) that though mild in character hitherto, it is possible that at any time they might become more formidable; (3) the prognosis in any case of jaundice in a child, whether sporadic or epidemic, must be guarded, for there is no means of knowing whether it will run a mild course or terminate in acute yellow atrophy of the liver.

Cockayne and Guthrie both refer to the possible relationship or analogy between mumps and catarrhal jaundice. The metastases which occur in mumps, and the fact that other glands, such as the testis and pancreas, may be affected, with or without the parotid, suggests that the infection may reach the parotid and other glands by the blood-stream. In mumps it is possible that the blocking of Steno's duct may be secondary to parotitis, and in jaundice the obstruction of the bile-duct may be secondary to hepatitis. A nurse in the Great Ormond Street Hospital under Dr. Batten developed mumps on December 1st. Between December 7th and 10th six children in the ward also contracted it. On January 2nd another nurse in the same ward developed catarrhal jaundice, but not mumps. A third nurse had mumps on December 10th, with very severe abdominal pain and vomiting, which Dr. Batten attributed to pancreatitis. He is inclined to think that pancreatitis was the connecting-link between mumps and jaundice in these cases. In the discussion on this paper Dr. Goodall doubted a connection between mumps and epidemic jaundice. He believed that there was a specific fever, of which the chief symptom was jaundice, and that its relationship to Weil's disease was a matter for further investigation.

J. MICHELL CLARKE.

[1] *Proc. Roy. Soc. Med.*, 1912, vi., Sect. Dis. Child, 49.

SURGERY.

On the transplantation of tissues and organs.—The removal of diseased and mutilated organs has for a long time been the chief function of the surgeon's art. But modern methods have opened up a far more ambitious object, viz. the replacement of these lost parts by the transplantation of living tissues taken either from the patient or from another individual. At first this attempt was only applied to skin defects, but step by step its scope has been widened, and it may be worth while, therefore, to review shortly what has been accomplished.

As regards the general principles which underlie this subject of the transplantation of tissues, there are two questions of fundamental importance to be considered. The first relates to the donor of the graft. This may be, and in human surgery generally is, the patient himself. This is known as an auto-plastic graft, and there can be no doubt that this method gives the best chances of success. In such an auto-plastic transplantation there are only two factors necessary for success, these being an aseptic healing of the graft and a satisfactory blood supply which will ensure its final preservation. The ordinary Thiersch's skin grafting is the commonest example of this, and its applicability is only limited by the conditions named. The largest areas divested of skin can be covered, but as the graft only consists of superficial skin layers, it will not reproduce hair or sweat glands. Unfortunately in one of the commonest conditions where it is desirable to make new skin grow, neither of the conditions can be fulfilled. I refer to the large chronic ulcers of the leg. The bed for the graft can in this region never be rendered aseptic, and more important than this, the circulation is so poor that new tissue growth is almost impossible. Hence any but the smallest grafts in this region constantly fail. Then the graft may be obtained from another individual, *i.e.* from an animal of the same species. This is known as a homo-plastic graft. Under these conditions another important factor comes into play. The cells and tissues of one individual do not necessarily live in the blood stream of another. In fact, it is held by many pathologists that they never do so. Clinically, of course, there can be no doubt that the homo-plastic graft does often fulfil its function, but this may be that it merely forms a scaffolding upon which the tissues of the recipient of the graft builds up a new structure.

The simplest form of homo-plastic grafting is that of the immediate transfusion of blood. Now whatever be the actual fate of the transferred corpuscles and plasma, there can be no doubt that the new blood can functionate for a sufficient time to allow the restoration of all vital functions. Some of the most

striking instances of this have occurred after severe hemorrhage in new-born infants when the blood has been supplied by the father of the child. A remarkable and dramatic account of such a case was given by Lambert, Carrel and Brewer.[1]

Schöne, who has summarised much of the recent work on transplantation[2] and written a short abstract of the subject in the December *Jahreskurse für Arztliche Fortbildung*, 1912, lays great stress upon the factor of blood relationship in the success of homo-plastic grafting. And all the most remarkable successes in direct blood transfusion took place when the blood was given from parent to child or *vice versa*.

The third type of graft is the hetero-plastic, in which the graft is taken not only from another animal but from one of a different species. In such a case there can be no doubt whatever that the graft quickly dies, but nevertheless it is substituted by new tissue, and therefore may actually lead to a perfect restoration of function. In this type of transplantation the grafting is often little more than the use of an organic easily absorbable splint.

The second fundamental consideration is the question as to how far the graft really lives and how far it is merely replaced by the tissue cells of its host. Strictly speaking, it is difficult accurately to define what we mean by "living." Take the question of the transfused blood cells. We know that blood cells under healthy conditions are constantly being destroyed and replaced, so that if it could be proved that transfused blood cells quickly die, it would not be fair, therefore, to say that they had not lived sufficiently long to carry on the vital function in their new host. Thus the question of vitality is rather a relative one. All tissue cells are constantly undergoing destruction and renewal, and it is no matter if the tissues of the graft have a comparatively short life, provided that they can ensure the renewal of similar tissue from the host. This substitution of the tissues of the graft by those of the host has been fully worked out by experimental observation by Axhausen,[3] Rehn,[4] and Wrede.[5]

It must suffice for the purposes of this summary to indicate some of the most useful applications of these new methods and then give a few examples of the more startling of its developments.

Some practical applications of grafting.—König has reproduced the ala nasi by transplanting a piece of the ear with its cartilage.

[1] *Med. Rec.*, 1908, lxxiii. 885.

[2] *Die Homoplastische and heteroplastische Transplantationen.* Springer. Leipzig, 1912.

[3] *Arch. f. klin. Chir.*, 1909, lxxxviii. 23; 1912, xcix. 519.

[4] *Beitr. z. klin. Chir.*, Bd. lxix.; *Arch. f. klin. Chir.*, 1912, xcviii. 1.

[5] *Verhandl. d. deutsch. Gesellsch. Chir.*, 1909, p. 35.

Plange among others has replaced an opaque cornea by grafts from recently removed eyes.[1] The transplantation of fascia has had many and diverse uses[2]; of these the most important are the filling-in of defects in the abdominal wall associated with large hernias and the replacement of large areas of dura mater removed in the treatment of tumours of the brain. The fascia is taken from the fascia lata of the thigh. Bones are frequently transplanted for the purpose of filling up the gap left after the removal of tuberculous or myelomatous disease.[3] This is done either by taking large pieces of bone, such as the shaft of the fibula, *en masse* or by simply filling up a gap by bone chips.

Some remarkable instances of grafting and isolation of viscera.—A few instances stand out as illustrating the extreme possibilities of these methods, though for practical reasons their applicability can never be great. Kuttner[4] replaced the head and upper part of the shaft of the femur by the parts taken from a recently defunct corpse. Union took place and a functional joint resulted. Perhaps the most perfectly attested case of joint transplantation was that shown by Lexer three years after the operation at the German Surgical Congress. A girl of 18 had a tuberculous knee excised—replaced by the corresponding parts from a limb which had been freshly amputated.[5] A strong and flexible joint resulted, and the patient was shown walking three years later, the new parts having been perfectly incorporated in the old.

The latest experiment of that master pioneer in this field, Dr. Alexis Carrel, has been related by Pozzi.[6] In an etherised cat, after preliminary ligature of all the great vessels entering and leaving the body cavities, the whole of the thoracic and abdominal viscera were removed in one mass and placed in Ringer's solution at a temperature of 38° C. Without any artificial assistance, the heart continued to beat for thirteen hours, and the activity of the alimentary canal continued without interruption. In fact, the whole mass of viscera continued to live and functionate as an independent organism, without the control of any central nervous system.

E. W. Hey Groves.

[1] *Klin. Monatsbl. f. Augenh.*, Bd. xlvi.

[2] See Kirschner, *Beitr. z. klin. Chir.*, 1909, lxv. 472, and *Arch. f. klin. Chir.*, 1910, xcii. 888.

[3] Macewen, *The Growth of Bone*, 1912; Axhausen, *loc. cit.*

[4] *Beitr. z. klin. Chir.*, Bd. lxxv.

[5] *Arch. f. klin. Chir.*, Bd. lxxx. lxxxvii.; *Verhandl. d. deutsch Gesellsch. f. Chir.*, 1911.

[6] *Bull. Med.*, 1913, xxvii. 27–28,.

Reviews of Books.

The Doctor and his Work. By CHARLES J. WHITBY, M.D. Cantab. Pp. 235. London: Stephen Swift & Co. Ltd. 1912. Price, 3s. 6d. net.

Dr. Whitby gives us, in this readable little book, what may be styled his thoughts on the medical profession.

He discusses the positions of physicians, surgeons, specialists, lady doctors, pharmacists, etc., in the ranks of medicine, and inclines to honour the general practitioner who makes a speciality of knowing the constitutions of his patients, as the most important member.

He is very severe (and we sympathise with him) upon modern quack advertisements, and a paragraph on this subject may be quoted as indicating his opinions, and as a sample of his somewhat trenchant style. He says (p. 125): "Revolting pictures of blotched and pimply faces; pseudo-scientific dissertations; anatomical obscenities; portraits of blatant American auctioneers masquerading as professors of this, that, or the other; frock-coated gymnasts lecturing to a roomful of open-mouthed doctors—these are but a few choice specimens of the blasphemous banalities which disfigure the pages of every journal of the hour," etc.

The chapter on "Medicine as a Guild" is thoughtfully written, and contains some judicious remarks on the retention of voluntary hospitals.

Dr. Whitby recognises the changes that are inevitable in medical practice and teaching, especially the new pathology introduced by Ehrlich, Wright and others.

Eugenics, homœopathy, spiritualism and other dangerous regions are fearlessly entered, and if the author cannot guide us through these, he has at least given us his opinion upon them.

The author, in fact, is not content even with these territories, but takes us into the unknown lands of speculative philosophy. Here, however, the timid reviewer cannot follow him, and must leave his interesting chapter on "The Doctor as Priest and Philosopher" to the readers (and he hopes they will be many) of this book.

Kidney Diseases. By W. P. HERRINGHAM, M.D., F.R.C.P. Pp. xvi, 378. London: Oxford Medical Publications. 1912. Price, 15s. net.

The author of this book has given us a most interesting volume based on his own observations, the result of many years of work. All aspects of renal disease are very fully dealt with,

though unfortunately little that is fresh is added in the way of treatment. Nevertheless he considers that there is no disease in which more can be done for the good of the patient by careful treatment than can be done in nephritis. The author's views on the relation of the different forms of nephritis to each other and to other morbid states are full of interest, and very clearly expounded. He explains his meaning by typical clinical cases, the pathology and morbid anatomy of which are admirably illustrated. We should, however, have liked to have heard something of the condition of the suprarenal glands in these cases.

After discussing the cause of uræmia at some length, the author suggests that the phenomena may possibly be connected with the absorption of dying cells, with the production of a condition analagous to anaphylaxis. His next paragraph, however, appears to subvert this, for it states that uræmic symptoms rarely occur in the large white fatty kidney, but are chiefly seen in those forms of the disease which are accompanied by fibrosis. This does not agree with our experience, for out of a consecutive series of 215 deaths from chronic renal disease 66 per cent. of the patients who suffered from the parenchymatous form of the disease died from uræmia, while only 13 per cent. of those who had typical granular kidneys died from the same cause.

With reference to tuberculin treatment in renal tuberculosis, the author appears to have little faith, and says that the more familiar vaccine therapy becomes the more hesitatingly are its claims put forward.

Several chapters devoted to renal disorders in connection with pregnancy have been written by Herbert Williamson, who has performed his work well, explaining most lucidly the modern views on the origin, course and treatment of these toxæmias.

Consumption in General Practice. By H. Hyslop Thomson, M.D., D.P.H. Pp. xv, 335. London: Oxford Medical Publications. 1912. Price, 12s. 6d. net.

The second edition of this book has been entirely rewritten, and much new matter has been added. The work is divided into three sections, under the headings—Diagnosis, Prognosis and Treatment.

Of the first three chapters of Section I, dealing with the importance of early diagnosis, and the means by which it may be made, it would be difficult to speak too highly.

Those to whose lot it falls to go into the "histories" of a large number of phthisical patients know how much need

there still is of a more widespread knowledge of the clinical facts taught in these chapters.

Unfortunately, the author is one of those who still cherish the bugbear that the rectal taking of temperatures " except in hospitals and sanatoria is more or less impracticable " (*sic*).

Without entering into the discussion of this question, it may be said that throughout the book those who have convinced themselves of the necessity of taking rectal observations will find many reasons to congratulate themselves on having formed this conviction.

It is strange to find in a volume which, on the whole, covers the ground most thoroughly, no mention of the variations in temperature associated with the menstrual cycle both in normal and tuberculous women.

The question of artificial pneumo-thorax is quite insufficiently dealt with.

The whole of Section II, on " Prognosis," is excellent, especially the chapters on " Indications from Localising Symptoms," and those on " Ultimate Prognosis " and " Conclusions."

The chapters on " Modern Sanatorium Treatment " and " Treatment by Auto-inoculation " are very good indeed.

Dr Thomson makes some very interesting observations from his personal experience. He has found that incontinence of urine in the female is of bad prognostic import, and also that the development of freckles in a certain type of patient with pale complexion, fair skin, and light or auburn hair often points to a very refractory type of disease.

Considerable importance in prognosis is attached to the presence of a positive diazo-reaction.

The question of the use of tuberculin in treatment is not widely entered upon, but, which is more important, the author gives fully his own methods, opinions and results.

He believes in tuberculin, sub-cutaneously, as a diagnostic agent, but looks for a marked reaction with malaise, etc. He is not apparently troubled by thoughts of induced susceptibility or reaction due to a healed focus.

It is pointed out, as it cannot be too often, that the point is not whether a " normal " person, nor even a person with a focus of inactive tuberculosis, *will* react, but whether a reaction in a patient *suspected for other reasons* is of diagnostic value.

Unlike most authorities, the writer considers hæmoptysis a contra-indication to the use of tuberculin, and he tells us nothing of his views on its use as febrifuge or in symptomatic treatment in advanced cases.

The opinion is advanced that it is dangerous to break off suddenly either treatment by induced auto-inoculations or a course of tuberculin, presumably from fear of a sudden drop

in tolerance not accompanied by an equivalent drop in sensitiveness: it is not quite clear how "tapering off" with smaller doses after attaining a maximum will help in this matter.

The writer is undoubtedly right when he says that many patients who have reached a point at which they cease to inoculate themselves by exercise need then a course of tuberculin treatment.

The chapter on the treatment of symptoms and complications is very good indeed. Dr. Thomson, who has known how to take full advantage of his clinical experience, is much to be congratulated on this book.

The Surgery of the Skull and Brain. By L. BATHE RAWLING, F.R.C.S. Pp. xi, 340. London: Oxford Medical Publications. 1912. Price, 25s. net.

This work is one by an author who has devoted himself for many years to the study of a special subject, and to its practical exposition. It is marked by a lucidity of description and illustration which makes it easy to read, and which carry conviction to the reader.

The chapter on fractures of the skull is particularly valuable, and the original illustrations in this and other parts of the book make it a most welcome addition to the literature of the subject.

The author adopts and recommends a simple operative technic, preferring hand instruments to those actuated by mechanical motors.

We should welcome in future editions a chapter on the physiology of the brain in its relations to practical surgical diagnosis and treatment.

Hare-lip and Cleft Palate. By JAMES BERRY, B.Sc. (Lond.), F.R.C.S., and T. PERCY LEGG, M.S. (Lond.), F.R.C.S. Pp. xvii, 324. London: J. and A. Churchill. 1912. 12s. 6d. net.

This is perhaps the most satisfying work on the above subject we have read, and it will well repay perusal by all who take an interest in the repair of such deformities.

The preliminary chapters on development and anatomy contain just as much information as is necessary for the proper appreciation of the various types of deformity that occur, and the methods of dealing with them. We think the chapter on the treatment of hare-lip would have been more complete had there been included an account of some of the better

known incision-plans in addition to those recommended by the authors.

The importance of invariably preserving the pre-maxilla is most properly emphasised.

No definite pronouncement is made as to the best age at which a cleft palate should be closed, but we gather from the statistics given that the authors are not in favour of very early operation, and the expert opinion that speech-training is best commenced at the age of six years seems to support this view.

The preliminary routine removal of the mass of adenoids which is so frequently present is deprecated, for the reason that it helps to block the naso-pharynx and so assists in correct articulation ; but we doubt whether this advantage outweighs the many disadvantages of the presence of such a mass.

Langenbeck's operation, as practised by the authors, is described in full detail, and will be of the utmost service to beginners in this operation.

Amongst other operations mentioned that of Brophy receives full attention. Its dangers and high mortality are thoroughly discussed, and lead to the opinion that it is questionable whether it is desirable to do an operation which undoubtedly involves considerable risk when the same result may be obtained by waiting for a year or two.

A useful addition to the book are chapters on secondary operations on the palate and lips, from which many practical hints may be obtained.

Public Health Chemistry and Bacteriology. By DAVID MCKAIL, M.D., D.P.H Pp. vii, 409. Bristol: John Wright & Sons Limited. 1912. 6s. 6d. net.

Dr. McKail describes this book as a handbook for D.P.H. students, and explains in his preface that it is based on notes prepared by the writer for his classes. Standard works on the subjects with which it deals and also papers in current journals have been freely used, and the amount of matter contained in a comparatively small compass is certainly considerable. The book is divided into two parts, chemical and bacteriological, and there are appendices dealing with the regulations for the D.P.H., with the Local Government Board Regulations as to the use of preservatives in milk and cream, and with Park and Krumwiede's studies on bovine and human types of tubercle bacilli. There is also an efficient index. The descriptions are necessarily brief, but quite lucid and complete, and will be readily followed by those who have experience of laboratory methods The book is in no sense a "cram book," and could not, we think, under any circumstances be used as such ; it may be

confidently recommended to those who are studying Public Health in the usual laboratory courses as a useful adjunct to class work, and as a work of reference. The theoretical matter is very briefly dealt with, but is sufficiently complete to prove useful in revision work, or as complementary to instruction already received in classes or lectures, but would be found somewhat too concise for those approaching the subject for the first time. The practical methods are described in sufficient detail to be useful as laboratory guides, and are quite up to date. As a whole we consider the book a good one, as it covers a large field and will be found quite reliable in detail.

The Work of the Digestive Glands. By Professor I. P. PAVLOV. Translated by W. H. THOMPSON. Pp. xiv, 255. London: Charles Griffin & Co. 1910. Price, 10s. 6d. net.

The appearance of the first edition of this work was welcomed not only by the physiologists, but also by the practical clinicians, for the experiments of Pavlov and his assistants explained much that had previously beem empirical, and reduced the number of the "off-chance" prescriptions and dietaries which are given to patients suffering from disorders of digestion.

The new edition, we observe, still gives on the title-page Professor Pavlov as author and Professor Thompson as translator, an arrangement that hardly gives an accurate version of their relative responsibilities.

Professor W. H. Thompson has very greatly increased for clinicians the value of the original book by adding two chapters of his own on the muscular movements of the alimentary canal. Since the X-rays have made the investigation of these movements comparatively easy, it has become at least as necessary to be familiar with the normal movements as it is to be familiar with the physiology of the digestive juices of the alimentary canal.

Recent work has necessitated the re-writing of a whole chapter, and various additions have been made throughout the book.

Those who wish to keep abreast with modern theory as it affects practice must obtain this book.

Diseases of the Nervous System. By JUDSON S. BURY, M.D. Lond., F.R.C.P. Pp. xx, 778. Manchester: At the University Press. 1912.

In this text-book the whole field of nervous diseases is covered within a moderate compass. The literature of the subject is now so great as to make it difficult to avoid excessive

length, and yet leave out nothing essential. This problem has been fairly well met in the present volume. The book is well and clearly written, and the illustrations are numerous and well selected to elucidate the text. The coloured plates illustrating cerebral hemorrhage are especially good. As we should expect from the author's previous work, the section on multiple neuritis is particularly well done. That on intracranial tumours might be somewhat extended with advantage on account of the importance of accurate diagnosis in these cases, and also of their difficulty. We think that in the future editions, which we hope to see, that more might be said about the experimental pathology and epidemiology of anterior poliomyelitis, of the various clinical types of disseminated sclerosis, and of the subsidiary signs in hemiplegia, which aid in the distinction of a hemiplegia of organic from one of functional origin. The author retains ataxic paraplegia as a convenient clinical term, whilst being careful to point out that the large majority of cases come under either subacute combined degeneration of the cord or disseminated sclerosis. We think, however, that something more might be added as to the pathological changes in the cord in these cases, which seem to us to show important differences from those found in the more common group of cases associated with profound anæmia. Personally, we should put still more strongly than the author has done the importance in cerebral syphilis of the efficient use of mercurial inunctions, and also that as syphilis can now be excluded by modern tests the use of iodide of potassium in non-syphilitic cerebral tumours has only a limited application. These are but minor criticisms. The general plan and execution of the book is good, the type clear, and it is successful in giving an adequate presentment of the subject.

An Index of Differential Diagnosis of Main Symptoms. By Various Writers. Edited by HERBERT FRENCH, M.A., M.D. Oxon., F.R.C.P. Pp. xii, 1011. Bristol: John Wright & Sons Ltd. 1912.

It is impossible to indicate in a short review the whole contents of this work. The aim of the editor and his collaborators has been to help the practitioner in the diagnosis of his cases by giving full information as to the conditions under which a particular symptom may occur, and by the aid of the associated signs present, thus enable him to distinguish the disease with which he is dealing. The book is therefore arranged in encyclopædic form, the main headings being those of symptoms, and these are supplemented by a general index

which gathers them together under diseases. The book is therefore meant to be used with a free reference to the general index, and on the adequacy of the latter its usefulness must largely depend. So far as we have been able to ascertain the index meets the conditions, and has evidently been compiled with great care and labour. It occupies over 150 pages of closely printed type in three columns to each page. No doubt a work of this kind will be found useful to many men to refer to for the meaning of unusual or obscure symptoms; and if employed as an addition to the more systematic works on medicine will form a useful supplement to them. Knowledge gained in this way is, however, apt to be scrappy, and if relied upon solely, to give a restricted view of disease. After all, each man works in his own way, and arrives at good results by very different means. So far as the work itself is concerned, we can recommend it as to being thoroughly well done, well illustrated, and omitting very little if anything in its extensive survey.

Life of Sir William Tennant Gairdner, K.C.B., M.D., LL.D., F.R.S., Regius Professor of Medicine in the University of Glasgow. By GEORGE ALEXANDER GIBSON, M.D., D.Sc. Pp. ix, 817. Glasgow: James Maclehose & Sons. 1912. Price 10s. 6d. net.

An additional and melancholy interest attaches to this biography of the author's old friend, which will be of great interest to the generation of students who were associated with him in his clinical work, as the accomplished author has now himself passed from the scene of his active labours. Sir W. Gairdner was born in 1824, and his death occurred suddenly in 1907, in his 84th year. The affliction from which he suffered was the Adams-Stokes syndrome, consisting in bradycardia, due to complete heart block, attended by attacks of unconsciousness and sometimes slight convulsions. He took the deepest interest in the development of his own symptoms, discussed them freely, and wrote an account of the course of his illness in 1902. The autobiographical sketch attracted great attention when published by Dr. W. T. Ritchie and Dr. Gibson.[1] The volume concludes with a large selection of papers on general and medical subjects which were contributed by the author to various journals, a fragment of the literary work which emanated from his fertile brain.

[1] *Edinb. M. J.*, 1909 (New Series), ii. 315, 507.

The New Physiology in Surgical and General Practice. By A. RENDLE SHORT, M.D., B.S., B.Sc. Lond., F.R.C.S. Eng. Second Edition. Pp. xi, 244. Bristol: John Wright and Sons Ltd. 1912. 5s.

Dr. Short has opened out quite a new line in this little work, and the profession have not been slow in appreciating its utility. Hence the exhaustion of the first edition in a few months, and the necessity for the present volume. Research speeds apace in the subjects dealt with and although so short a time has elapsed, a number of additions have been made. A chapter on the growth of bone has been added embodying Macewen's recent work, showing that the periosteum takes no share in the regeneration of bone. Henderson's views on the relation of a diminished quantity of CO_2 in the blood to shock, certain risks attaching to the administration of saline infusions, and the movements of digestion are further additions to note. New paragraphs have been added dealing with gastric secretion in man, the pituitary gland and the use of pituitary extract, sensory localisation in the brain, the innervation of the pleura and the referred pain of pleuritis and fibrositis. It is impossible to speak in too high terms of this book. It is a most lucid exposition of work much of which is none too easy to grasp, and which was unknown to those who finished their medical curriculum twenty years ago.

A Manual of Elementary Zoology. By L. A. BORRADAILE, M.A. Pp. ix, 470. London: Henry Frowde and Hodder & Stoughton. 1912. 10s. 6d. net.

This book is written apparently not with the intention of covering any known syllabus, but with the idea of giving the student an introduction to those animal forms commonly used in the laboratory. It seems a pity that so much space should be given up to a detailed description of the frog, when we already have such excellent books as the new and revised edition of Marshall's *Frog*.

Several features seem to us to be worthy of special note, and we must congratulate the author on his departure from many of the text-figures that have done yeoman service in previous books. Some of the diagrams, however, could be improved upon, *e.g.* the third figure on page 183, and also the figure which illustrates the scales of the dog-fish.

It is a matter for regret that such a small space has been given to a consideration of the protozoa and of the insecta, when we consider their importance to the medical student. It must

be remembered that the medical student will never have an opportunity of getting a thorough grasp of such forms at any later period in their course, which is already tremendously overcrowded.

A few features in the book might with advantage be carefully considered when a new edition is being prepared. For example, would it not be better to return to the more generally accepted spelling of the name paramœcium? Again, we feel inclined to believe that the diagram representing the changes that occur in the nucleus of paramœcium during conjugation is not quite accurate, and that showing the venous system of the dog-fish is also doubtful. We have also grave doubts as to the real nature of the artery spoken of as the hyoid artery in the dog-fish, and of that foramen which is called the obturator foramen in the rabbit.

We would suggest to the author that in a subsequent edition part of the space at present allocated to the frog should be given up to a brief consideration of some of the more general problems of zoology. In spite of these few criticisms, we must heartily congratulate the author on the production of the book.

A System of Surgery. Edited by C. C. CHOYCE, B.Sc., M.D., F.R.C.S. Vol. II. Pp. xii, 1105. London: Cassell & Co., Ltd. 1912. 21s. net.

Last year we had the opportunity of reviewing the first volume of this work, with which we were very favourably impressed. Although the present volume deals largely with branches of surgery in which few striking advances have been made during quite recent years, and although, as a necessary consequence, the main bulk of its material has already appeared in other modern text-books, yet there will be found herein embodied a great deal of recent research work and discovery. Recent advances in anatomy, physiology, embryology, pathology and other branches of science have been drawn upon wherever they tend to throw light upon the problems of surgery proper.

This volume is largely occupied with the surgery of the abdomen and alimentary tract. Each section is treated fully, though without unnecessary elaboration. Only the more essential operations, and those best in accord with our present-day knowledge are described, and there is a complete absence of those obsolete methods which survive, alas! in too many would-be authoritative works.

Sampson Handley contributes an article on the breast, and includes in it the results of his important researches concerning the spread of carcinoma. He also sets forth an ingenious theory

as to the causation of "Paget's disease of the nipple." He attributes this chronic eczematous condition to interference with the drainage of lymph from the nipple and areola. He postulates the presence, in every case, of a carcinoma in the breast which, having permeated the mammary lymphatics, has led to interference with the drainage of lymph from the subareolar plexus.

Several of the writers speak highly of the beneficial effects of a prophylactic course of X-rays after operations for the removal of cancer. Statistics are given in support of this procedure.

Urinary surgery is dealt with by Thomson Walker, and that of the male and female genital tracts by Russell Howard and Victor Bonney respectively.

The whole volume is very readable, and is interestingly written. Printing and illustrations are clear, and the indexing is thorough. It can be safely recommended as a good and reliable exposition of modern, up-to-date surgery.

A Manual of Surgical Treatment. By Sir W. WATSON CHEYNE Bart., C.B., and F. F. BURGHARD, M.S., F.R.C.S., with the assistance of T. P. LEGG, M.S., F.R.C.S. and ARTHUR EDMUNDS, M.S., F.R.C.S. New Edition entirely revised and largely rewritten. Volume III. Pp. xxviii, 575. London: Longmans, Green & Co. 21s. net.

This volume deals with the injuries and diseases of joints and spine and the surgical affections of the head and neck. The section on the injuries of joints contains but little fresh matter, but the operative treatment of complicated dislocations is brought up to date. The chapters dealing with tuberculosis are of that high order of merit which we should expect from one who has devoted so much attention to the subject. They are of the greatest value in containing so many and such precise details for the application of treatment to every variety of this multiform disease. Gauvain's various methods of conservative treatment of tuberculous spine are given in some detail, indicating the great importance attached by the authors to this aspect of the subject.

The chapter on cranial injuries is written on the usual lines of English text-books. The question of decompressive operations for cases of fractured base with prolonged coma is not dealt with, nor is that of intra-cranial hemorrhage in the newly born.

The modern technic for operations on cerebral tumours is

well described, but here again there is a disappointing blank, in the subject of pituitary tumours being omitted altogether.

The chapter on trigeminal neuralgia is little more than an account of various operative details, without much guidance being given as to the comparative merits of each method. No opinion is expressed as to the value of the alcohol injection method, and the possibility of dividing the sensory root of the Gasserian ganglion without removal of the latter is not mentioned.

Surgery of the Rectum for Practitioners. By Sir FREDERICK WALLIS, M.B., B.C., F.R.C.S. Pp. xv, 355. London: Oxford Medical Publications. 1912. 15s. net.

This book is a useful guide to the subject of which it treats. Unfortunately the author did not live to complete the work, though he was correcting the proofs up to within a few days of his death. The book is evidently the work of a surgeon very actively interested in this branch of surgery, and Sir F. Wallis's appointment as surgeon to St. Mark's Hospital gave him the special experience he required in undertaking its production. The book contains many suggestions as to diagnosis and treatment of much practical value, the illustrations are abundant and excellent, and the records of many very interesting cases which were under the writer's own care are to be found in its pages. We must confess that we were rather disappointed in the chapter on the treatment of rectal cancer, but as this comes at the end of the book, probably the author was not at that time able to deal with it in anything like an exhaustive manner.

We presume that the title of the book, which says that it is for practitioners, is intended to indicate that it contains more than a student would be expected to know, and yet that it is not an exhaustive work on the surgery of the rectum. If so, this very well defines the scope of the book, and we feel sure it will be found a very useful help in the diagnosis and treatment of rectal diseases by the general practitioner.

The First Signs of Insanity, their Prevention and Treatment. By BERNARD HOLLANDER, M.D. Pp. 347. London: Stanley Paul & Co. [1912.] 10s. 6d. net.

There is no inconsiderable output of books written by medical men on medical subjects, addressed to the laity and published through the lay press. The explanation is perhaps

to be found in an altruistic spirit which yearns to educate this class. The instruction may be in the matter of their feeding and digestion, in the understanding and management of their "nerves;" in some the mysteries of sexual life are conveyed with a pornographic sauce suitable to salacious palates; whilst most convey a very evident revelation of the author's powers of insight, judgment and treatment. Nor is the address of his consulting-rooms unknown as an affix to the preface.

In the matter of anything that might appeal to the morbid or superficial reader Dr. Hollander's book is quite free. Its purpose as set forth is to show what insanity really is, how it can be prevented, and how treated before it reaches the incurable stage; no small task, we should opine. It may at once be said that the work is a good and useful compilation of all that is necessary to place before the laity, and is expressed in suitable language. We assume the intention of the work to be mainly popular (although the general practitioner and lunacy specialist are also instructed), not only because so stated by the author, but because there is a certain suggestion not wholly absent as to Dr. Hollander's acumen and success in diagnosis, prophylaxis and treatment such as would be needless in a work addressed merely to his own profession. In a book so destined a certain freedom of detail and expression is allowable, but there are to be found many statements which cannot be allowed to pass without comment. We might be led to infer, for instance, from the allusion to the "non-recognition of the principles of localisation of mental functions," that no investigations had been made, no speculations advanced, no conclusions entertained in this matter; whereas it is only the almost insuperable difficulties in arriving at any sound inferences that has prohibited the real scientific worker from so doing. One of the foremost of these has written to the effect that practical psychiatry has not yet begun to consider the distribution in the cortex of the purely psychical functions as distinct from sensory and motor processes. Dr. Hollander reminds us that "behind those sensory and motor centres there lie also all the functions which constitute mental phenomena." Very much behind, we agree, if not taken in a topographical sense. If Dr. Hollander can indicate any reliable and corroborated proof of this localisation other than has been furnished by Wundt, Munk, Monakow, Tanzi and others they will be welcome. We are not unmindful of his work on this subject so frequently alluded to in the present volume. Certainly in the passages following his quoted remarks we find nothing illuminating. We are in another place advised that more attention should be paid to the shape of the head, both in the living and the dead, and that in the author's opinion the study of abnormal heads in the insane will prove valuable. Such observation

has been going on for many decades, and the results have been so indeterminate that no conclusions of value have been drawn. It is true that some observers have declared that though irregularities in cranial conformation are not uncommon in the sane, they are relatively more frequent in the insane; this is, however, not a matter for the throwing out of conjectures, but for series of measurements and analysis of cases. At any rate, Tanzi does not express himself as sanguine of any results in this direction. He writes, "The cranium is still the subject of measurements and studies as minute as they are sterile in practical results."

Again, Dr. Hollander comments on the profound ignorance existing as to the naked-eye appearance of the brain and the relative value of development of its different parts. Does he not acknowledge the valuable work of Mickle, of Poggi, Giacomini, Mingazzini, Benedikt, not to speak of Bolton, Lattes and others? At the Wakefield Asylum, and no doubt at others, paraffin casts were preserved of most brains for many years and convolutionary anomalies noted in the records; so, at least, investigation has not been idle. Hollander has much to say on the subject of surgical interference in cases of cranial traumatic insanity when so determined, and quotes his previous writings in advocacy of the need for this to be adopted with greater frequency than now thought requisite. We think those cases of genuine insanity which are said to have benefited by operation require very careful scrutiny. There certainly are instances, generally admitted, where definite symptoms of brain disturbance, not necessarily insanity, but attended with emotional disturbance or blunting, result from direct or secondary irritation. Excluding gross lesion by laceration, hemorrhage, atrophy, etc., relief afforded by operation is to be hoped for. But the larger number of so-called traumatic insanities are only psychoses in predisposed persons aroused by or associated with accident. Sometimes both psychosis and its improvement by operation are the result of suggestion. That there is no widespread resort to operative interference except in few and carefully chosen cases is not, as might be gathered, owing to supineness or ignorance.

We have no desire to offer too carping a criticism of this book, which contains a great deal that is interesting and profitable to its lay readers; but we deprecate the tendency shown in many places to set forth, as from a point of vantage, what ought to be done and what has not been done in matters of morbid psychiatry by others than the author, as well as an insufficient recognition of that already achieved. Readers might infer that there was no host of able investigators, the restriction of whose output was that attending all practical and lasting scientific work, as distinguished from the mere compila-

tion of books and general dissertations which neither merit nor require notice.

The book is well produced. We note that almost every public journal seems to have received a copy for review, and that Dr. Hollander's name is duly honoured throughout the land.

The Sexual Life of the Child. By Dr. ALBERT MOLL. Translated from the German by Dr. Eden Paul. Pp. ix, 339. London: George Allen & Company Ltd. 1912. 15s. net.

It was inevitable that sexual life in the child both normal and morbid should receive investigation, and Dr. Moll's qualifications for the task are undoubted. Hitherto in England, with one eminent exception, the subject of sexual life and its perversions has been considered with much reserve. It may be that, adopting the attitude of Mr. Podsnap, we have indignantly put the question behind us, as un-English, or perhaps that we have been, although far from unenlightened, after the manner of Albion, cloaked with a perfidious modesty. It must be admitted that science should have no scruple in unveiling these secret and discreditable perversions for study; it is only to be stipulated that they be not unduly paraded with all their repugnant features, but inspected in chasteness of spirit and revealed within carefully circumscribed limits. We hold it, above all, both possible and needful to deal with the whole subject tersely and with ultra-scientific dryness, avoiding all superfluous clinical details, being hypercritical in the elimination of anything that can appeal to a prurient imagination. The supposed limitation in issue of a book to certain professions is not so protective against abuse as the punctilious handling of the subject-matter. We have here a closely-printed work of over three hundred pages, and though, on the whole, it is not irrelevantly charged with offensive features, we consider it unnecessarily prolix and indulgent in detail, like most books of its kind. The author drops a warning during its course as to the need for reserve in the acceptance of a sexual interpretation of certain conduct in the young, but the general effect of the work is to arouse a distasteful suspicion of the child's sexual neutrality, and to undermine our reasonable conceptions as to the general and virtual purity of child-life. We should confess to a sense of shock did we wholly accept Moll's statements as to the large proportion in which there exists a latent sexuality in many of the games, the habits, the natural or erratic friendships of the young, as also his pronouncement in regard to the frequent and gross sexual proclivities of children, whether innocently acquired or the

outcome of innate vice. Unless, pharisaically, we gaze at this deplorable aspect of the child's sexual life as one without our own shores, we should in adopting Moll's views allow an attitude in ourselves of unpleasant inquisitiveness into behaviour in the young, hitherto disregarded; a quite unpalatable state, and one we trust by no means often necessary. A fresh and consuming anxiety, too, would be afforded to those clergymen, lawyers and schoolmasters who are supposed to share with medical men the interests of child-study.

We find in this book details of every vice and perversion concerned with sexual life in the child; their auto- or hetero-genesis, their indictment or apology, prevention and treatment. From the jurisprudential point of view, Moll utters the warning that the acceptance of the child-witness as one inexperienced and unprejudiced in sex-matters is a grave error. The possible strength and variety of sexual imagination must be allowed for. Another item, redness of the genitalia in female children is not to be assumed as necessarily the result of a criminal assault. We note that Moll does not endorse Freud's views as to the sexual origin of neuroses, nor the reliability of his psycho-analytic method. There is lengthy discussion, worthy of careful study, as to the desirability, time and method of enlightenment of the young in sexual matters. Finally, those who desire to obtain at all costs a both comprehensive and detailed account of every aspect of the child's sexual life will not search this book in vain. To such we commend it. Dr. Eden Paul, the translator, has done his task most efficiently.

Organische Arsenverbindungen und ihre Chemotherapeutische Bedeutung. Von Doz. Dr. M. NIERENSTEIN. Pp. 94. Stuttgart: Ferdinand Enke. 1912.

This important paper on the therapeutic properties of the organic arsenic compounds appeared in Volume XIX of the *Sammlung Chemischer und Chemischer-technischer Vorträge*, edited by Professor Herz of Breslau. Its author, Dr. Nierenstein, is now a member of the staff of the University of Bristol, and the selection of this contribution for publication by Professor Herz sets the seal of European approval upon the work. Without criticising the conclusions, we may express the interest with which we have read the work, and our appreciation of the supreme importance to medicine of these advances in bio-chemical knowledge.

The section dealing with the history of the therapeutic use of arsenic covers a period beginning with Dioscorides, and includes names such as Paracelsus, Fowler, Cadet,

Bunsen, and, in our own times, Ehrlich, and many more. The modern discovery of the diminished toxicity of certain organic arsenical compounds dates from Bunsen's work on cacodylic acid, which is readily soluble, and in spite of its high arsenic content shows little or no toxicity. The arsenic here appears to be combined in a manner different from that of its inorganic compounds. Ehrlich set himself the task of explaining the precise nature of this difference, and determined that the non-toxicity of the arsenic in cacodyl depended upon its pentavalency, for in this condition it lost its activity towards protoplasm. He then endeavoured to obtain organic arsenic preparations in which the arsenic is trivalent, and therefore active as regards pathogenic protozoa. The result was the discovery of such compounds as arseno-phenylglycin and dioxydiaminoarsenobenzol (salvarsan). Dr. Nierenstein briefly reviews the various cacodylates which were obtained by Bunsen and Bäyer, and goes on to demonstrate the progressive advances made until the relatively non-toxic group of "arrhenal" compounds was produced from methyl-arsenate. Passing on to combinations with the higher carbon series, the aromatic series of arsenic compounds were formed, which contained phenyl, di-phenyl or tri-phenyl groups, and are known accordingly as the primary, secondary, and tertiary aromatic arsines. Of these the "secondary" series are highly toxic. Nierenstein, working with Moore and Todd in Liverpool, found that so far as trypanosomes were concerned the cacodylic and arrhenal compounds were inert. Then "atoxyl" was arrived at (the sodium salt of p-amino-phenylarsonate), a drug well known in medicine. The experimental work of Nierenstein and others has already been published in the *Sleeping Sickness Bulletin* of the Tropical Diseases Bureau, Imperial Institute, London, and is not referred to at length in this paper.

The remainder of the article is devoted to a discussion of the theories of the action of atoxyl. These theories are three in number: Ehrlich's *Reduction Theory*, Breinl and Nierenstein's *Oxidation Theory*, and Uhlenhuth's *Partial Cell-action Theory*. Here we are introduced to bio-chemical phenomena of absorbing interest. The argument turns largely upon the activity of the arylarsonates against protozoa in the living blood-stream, as contrasted with their inactivity against protozoa *in vitro*. Ehrlich and Hata suggest "that spirochætes possess a whole series of chemo-receptors: only those whose affinity for the corresponding atom-groups of the chemicals is considerably stronger than that of the host's tissues are of any account in chemotherapy. These receptors may include an *arseno-ceptor*, an *oxyamido-ceptor*, and a *halogen-ceptor*, whose active affinity for dioxydiamidoarsenobenzol

may explain the ready destruction of the parasites, without injury to the host.

Ehrlich conjectures that in the protoplasm of the trypanosome arseno-ceptors exist, with a special affinity for toxic reduction-products formed by the host's tissues from the non-toxic arylarsonate.

Breinl and Nierenstein do not accept Ehrlich's view of a reduction process taking place, but explain the therapeutic action of atoxyl as follows :—

(1) That the amido group of atoxyl unites with serum-proteid to form a so-called " atoxyl-serum."

(2) That by an oxidation process (possibly due to ferments) the " atoxyl-serum " is oxydised, and arsenic set free.

(3) That simultaneously a reduction takes place, splitting the atoxyl into arsenious acid and aniline, the aniline being excreted in the fæces.

(4) That the arsenic, liberated partly by oxidation, partly by reduction ferments, and probably also by the trypanosomes themselves, exerts in a nascent state a destructive effect on the parasites.

These authors think that the amino group is the anchoring-group which binds the atoxyl to the serum. They have separated " atoxyl serum," and liberated the arsenic with liver emulsion.

Uhlenhuth's theory is that the action of atoxyl is an indirect one, which by stimulating the cells of the host causes them to manufacture some substance antagonistic to the parasites.

Dr. Nierenstein carefully examines these various theories, and quotes a great deal of chemical and bio-chemical experiment to elucidate the problems involved. It is a fine, clear piece of work, and the reasoning is able and direct. There is evidence of tremendous energy in the experimental investigations which he has himself conducted, and we congratulate him on the readable form in which he has handled this abstruse subject. Medical science in Bristol cannot fail to profit by the presence of such workers in the University.

Elements of Practical Medicine. By ALFRED H. CARTER, M.D., M.Sc. Tenth Edition. Pp. xvii, 683. London : H. K. Lewis. 1912. Price 9s. net.—For thirty-two years Dr. Carter's small text-book has held its own. The most striking fact is the way in which the author has kept scrupulously to the very elementary description of diseases which he believes (and many others too) form the surest foundation for a medical student's education. Unlike so many works which have been published in the meantime, Carter's *Medicine* has not made

the mistake of trying to inflate itself into a system. We believe that for all its conciseness this little volume contains a very great deal that every student ought to know, and a good deal more than many practitioners remember. In these days of dropsical volumes and a flatulently garrulous letterpress, we grow fonder of the trim khaki-clad veteran of our shelves.

Acromegaly : A Personal Experience. By LEONARD MARK, M.D. Pp. viii, 160. London : Baillière, Tindall & Cox. 1912. Price 7s. 6d. net.—An autobiographical account of any disease from the pen of a physician who is himself the subject of that disease forms a contribution to medical literature which must evoke in a particular degree the sympathy of every reader. And this feeling cannot fail to tinge with regret our satisfaction that in this case the description is supremely good. Dr. Mark has avoided the common pitfall of less well-informed writers on their own symptoms, and he has written of acromegaly and its attendant psychical disturbances without that too close self-analysis which betokens true hypochondria. He has given us a restrained but minute account of his sufferings, both psychical and physical, and it cannot be doubted that we are the richer in our understanding of acromegaly by what he has written and suffered. Dr. Mark has brought to the observation of his symptoms not merely the mind of a man well versed in the medical sciences, and full of wider information of a general sort, but in addition that which the study of acromegaly especially demanded, the exceptional faculties of an artist. We are reminded of Gomperz's explanation of the progress made by the Greeks in the lay art of medicine, " Because the physicians of Greece shared with her poets and sculptors the same splendid faculties of keen sight and faithful reproduction of the thing seen." These faculties may be appreciated with lamentable force in Dr. Mark's book, for we fully realise that even as the artistic senses increase, so in like measure must the sensibility to pain and suffering be increased. Putting aside for a moment our personal sympathies for a friend, it is impossible to read these experiences without obtaining a far clearer and more intimate conception of the symptom-complex, which depends upon some unexplained defect of the *sella turcica* and the pituitary body. We may take from Chapter III a marvellous bird's-eye view of the march of events, beginning with slight defects of hearing and sight, and queer feelings in the head, together with drowsiness. Then the miseries of increased sensitiveness to cold and exposure experienced in a country practice. Nasal catarrh, neuralgia and febrile attacks followed, which resembled influenza. Simultaneously indigestion was produced by the altered bite of the teeth. Restlessness seems to have been made harder to bear by reason of an

extraordinary sense of fatigue, and presently by attacks of heart failure. Neuralgia, asthenopia, and nasal catarrh all increasing, there came a climax in the disease, and a *black week* with extreme mental depression; and after that a change in the symptoms. The acromegaly began, alterations in physique were noticeable; not, indeed, to the patient, for although his brother discovered the nature of the disease at the age of 45, and Pierre Marie four years later "spotted" him in a crowd at a medical congress as a *typical acromegalic*, it was not until he reached the age of 50 that the knowledge suddenly dawned on Dr. Mark that he was affected with acromegaly. With this knowledge came a decided amelioration of the discomforts of the disease, and the account closes with the remark: "There is still much in life that I am able to enjoy, even if to slight 'unsoundness of eyes' I am gradually adding 'weakness of wind and limb.'" In an afterword Dr. Mark adds one of his characteristic art notes in the form of a "Reverie after contemplating a stone figure of the thirteenth century carved on Reims Cathedral."

Small-Pox and its Diffusion. By ALEXANDER COLLIE, M.D. Pp. 58. Bristol: John Wright & Sons Ltd. 1912. Price 2s. net.—It is only natural that the ill-informed householder should view with alarm the establishment of a small-pox hospital in his immediate neighbourhood; but that his fear of infection by distal aërial dissemination is practically, if not absolutely, groundless, is amply shown by Dr. Collie in the careful and painstaking statistics and drawings which he has admirably put together out of his practical experience. It is a proved fact that small-pox is invariably conveyed by the infected person or the infected thing.

Sprue: its Diagnosis and Treatment. By CHARLES BEGG, M.B., C.M. Pp. vii, 124. Bristol: John Wright & Sons Ltd. 1912. Price 6s. net.—The principal value of this book is to set forth the author's treatment for sprue by means of santonin. It is widely recognised that this method has a real value, and it is important to follow the author's technique exactly. For instance, recent santonin is almost useless; it must be old and yellow with exposure.

Vicious Circles in Disease. By JAMIESON B. HURRY, M.A., M.D. Second Edition. Pp. xiv. 280. London: J. & A. Churchill. Price 6s. net.—Most of the chapters in this monograph have been collated from communications sent to the *Lancet*, the *British Medical Journal*, the *Practitioner*, and the *Medical Press*, and deal with the reciprocal interaction of diseased processes or habits. The contents are arranged under different headings, Nervous System, Cardio-vascular System, and so forth, in good

clear type, and the book is in all respects excellently "got up." Many of the vicious circles which the author has carefully described are of great interest, both pathologically and from the point of view of treatment. Some are simplicity itself, such as the fact that scratching inflames eczema and makes it worse; others, in the respiratory and circulatory sections, are more complicated, but all are worked out in a convincing manner, and the value of the information given is very much enhanced by the pertinent and judicious quotations from many well-known English and foreign authors. Most of the circles are medical, but surgery is not forgotten, nor the special senses, and one is struck with the extensive application of the "Zirkelschluss" in every department of our art. The diagrams are good, and illustrate the text in a useful manner. The style is also clear and concise. We may add that in spite of the tabulated nature of this little volume it is very interesting reading. It has, moreover, a good index.

Manual of Surgery. By ALEXIS THOMSON and ALEXANDER MILES. Fourth Edition. Vol. II. Pp. xv, 924. Vol. III. Pp. xv, 565. London: Oxford Medical Publications. 1912. Price 10s. 6d. each.—Volume II, dealing with regional surgery, is excellently arranged and beautifully illustrated. New features of the present edition are the exclusion of operative details from the descriptive parts of the work, the former being relegated to a separate volume; the inclusion of a most useful summary of the surgical anatomy of each region at the commencement of every chapter; and the addition of a number of very clear pictures, chiefly taken from actual clinical cases. We have no doubt that it will attain the popularity it deserves. Volume III is a small manual of operative surgery, and represents the appendix to the revised edition of the authors' *Treatise on Systematic Surgery*. It probably has the distinction of being the smallest modern book on the subject, and it will be interesting to note how long its authors will be able to keep it within such narrow limits. It deals with the whole subject from a student's standpoint, giving just enough to enable him to understand the principles concerned, without burdening him with the technical details which he would require to know if he were going to actually perform the operations. Several subjects—such as arterial suture, Matas's operation for aneurism, and the operative treatment of fractures—are described in such a brief way that it may be questioned whether from a practical point of view such description is of any value. The section on cleft palate is one which is so short and incomplete that no student could follow even the general principles of the various methods by reading it. The illustrations are numerous and delightfully clear.

Die Chirurgischen Untersuchungs-Methoden. Von Prof. Dr. HUBERT GEBELE. Pp. viii, 192. J. F. Lehmann. München. 1912. (Geheftet M. 8, Geb. M. 9.)—The object of the writer of this book has been to provide a brief, practical, and well-illustrated account of the various diagnostic methods employed in surgery. He does not deal with the clinical symptoms of particular diseases. The earlier sections of the book are concerned with the arts of inspection, palpation and percussion. The next sections are on the modes of passing sounds in various regions and of performing exploratory punctures and incisions; then come sections on the examination of secretions and exudations, and on the diagnostic methods based upon serum reactions. Lastly endoscopy of various kinds and radiography are fully considered. A striking feature of the work is the number and excellence of its illustrations. We may say, in a word, that they have all the good qualities one has learnt to expect in the publications of the firm of Lehmann of Munich. In our opinion the author has supplied a need—the need, namely, for a handy volume containing sufficient information to enable the inexperienced to carry out the various modern methods of examination, instrumental and other, which are essential to the making of an exact surgical diagnosis.

Leitfaden der Praktischen Kriegschirurgie. Von Dr. WALTER VON ŒTTINGEN. Pp. xvi, 377. Dresden: Theodor Steinkopff. 1912. Price M. 9.50.—This little book is written as the outcome of the author's practical experience in charge of a red cross field hospital in the recent Russian-Japanese War. It represents a most successful endeavour to summarise the principles of surgery which underlie all the emergencies of battlefield and base-hospital practice. It constitutes a veritable *vade-mecum* for the doctor who volunteers for a war, and who cannot burden himself with a large reference library. The first part deals with general surgery, modern weapons and their missiles, and effects upon their victims; aseptic technique as applicable in emergencies; operations, diet, transport and military sanitation. The second part is devoted to special or regional surgery, detailing the results of gunshot wounds of the various organs, head and extremities, and advising in a short, practical, dogmatic manner as to the best methods of treatment. The book is a wonderful example of its author's power of compressing a vast quantity of practical teaching into a small space.

The Extra Pharmacopeia. By MARTINDALE and WESTCOTT. Fifteenth Edition. Two volumes. Pp. xxxi, 1,114; viii, 370. London: H. K. Lewis. 1912. Price 21s. net.—In spite of its thin paper and close printing, the subject-matter of this work has grown to so great an extent that it has been necessary to

divide the matter into two volumes. Volume I has been kept down in size to practically that of the last edition. It contains everything the physician and pharmacist are likely to require for immediate reference on therapeutic matters, whilst the second volume acts as a supplement for further study, inasmuch as it contains the analytical memoranda, bacteriological notes, mineral waters, glossaries, analysis of patent medicines, etc. The amount of concentrated useful knowledge on every page is marvellous. In the midst of such wealth it is difficult at times to find what one wants at the moment, but we have no hesitation in saying that the more the book is studied the more useful it is found to be; in fact, it has proved itself to be indispensable both to the physician who prescribes and to the pharmacist who dispenses.

Treatment of Neurasthenia by the Teaching of Brain Control. By Dr. ROGER VITTOZ. Translated by H. B. BROOKE. Pp. viii, 117. London: Longmans, Green & Co. 1911. Price 3s. 6d. net.—This little book is addressed, the author tells us, to those suffering from "neurasthenia, psychoneurosis, or psychasthenia." It is probably very well fitted for its purpose, as it might distract the thoughts of such patients to go through the mental exercises given. To the medical reviewer, however, whom fate compels to read it through, the mental exercise is extremely severe. The central idea is that there are two brains, the "objective" and the "subjective." The latter is the seat of ideas and sensations, the former of judgment, reason and will. The objective normally controls the subjective, but in neurasthenics this control is insufficient or unstable. The diseases mentioned above are essentially a struggle between these two. The treatment is to educate the objective part of the brain. On page 26, however, we come across the statement, "The hand appears to be conscious of anything it touches, but the sensation is obliterated before reaching the brain, as the latter is not sufficiently conscious of what is touched." This checked the little enthusiasm we had to continue, and on pages 30 and 36 the author somewhat suddenly plunges into the "boundless inane," and informs us that the working of the brain can be felt by the physician's hand placed on the patient's forehead. This "working," it seems, gives rise to quite perceptible pulsations or waves, which vary according to the mental effort, and may even be recorded (as on pages 60 and 61) in the form of a diagram. The rest of the book is concerned with the control of these relations by simple mental exercises, and attempts to develop the will power. As hinted above, we can recommend the book to those afflicted with certain neuroses, still more to those who wish to become neurasthenics.

Landmarks and Surface Markings of the Human Body. By L. BATHE RAWLING, M.B., B.C. Cantab., F.R.C.S. Eng. Fifth Edition. Pp. viii, 96. London: H. K. Lewis. 1912.—The merits of this handbook are attested by the fact that only a year has elapsed since the fourth edition was published. Beyond a few improvements in some of the illustrations the volume remains unaltered. If we may venture a suggestion, it would be to include in the next edition the dates at which the ossification centres of the carpus appear. These most important landmarks in child development are somewhat scantily dealt with in the appendix, although they are readily studied by skiagraphy. Perhaps the author modestly underrates the value of his work for purposes of reference, not only to surgeons but also physicians. In size, type, and illustrations, the book reflects great credit on its publishers.

Statistics of Puerperal Fever and Allied Infectious Diseases. By GEORGE GEDDES, M.D., C.M. Pp. 119. Bristol: John Wright & Sons Ltd. 1912. Price 6s. net.—The object of this book is to show that puerperal fever is due to infection from the hands of those attending the labour, and that this infection comes from previous contamination of the hands in the dressing of suppurating wounds. An immense amount of work has been undertaken in collecting and compiling statistics showing the relative frequency of puerperal fever in the practice of doctors and midwives respectively and the close connection between the puerperal fever rate and the number of accidents occurring in any given area, this connection being the basis of the author's theory that the source of the infection is almost invariably a suppurating wound. The statistics on which the author's conclusions are grounded are most complete, and admirably arranged for easy reference. On this account the book should be of lasting utility to anyone engaged in the study of this subject.

Clinical Bacteriology and Haematology for Practitioners. By W. D'ESTE EMERY, M.D., B.Sc. Lond. Fourth Edition. Pp. ix, 274. London: H. K. Lewis. 1912. Price 7s. 6d. net.—Four editions of this practical handbook having appeared since 1902, it is unnecessary to comment at any length on its merits. It was a good book in the first edition, and the author has kept it up to date with his later revisions. The most important addition is a description of the author's simplified technique for the Wassermann reaction. We still know too little about the interpretation of the results of this test to be able to speak dogmatically as to the practical importance of even the original reaction, much less of its many modifications. Dr. Emery makes some useful observations on this subject, based on his experiences during three years. Possibly thirty

years hence we may be in a position to speak with greater certainty. Dr. Emery is correspondingly cautious and open-minded.

Public Health Law. By W. ROBERTSON, M.D., D.P.H., and A. MCKENDRICK, F.R.C.S. Edin., D.P.H. Pp. xii, 397. Edinburgh: E. & S. Livingstone. 1912. Price 5s. net.—As a book of ready reference and an epitome of law applicable to England, Wales and Scotland, this will prove both handy and reliable. The various enactments are condensed into the smallest possible space, and where necessary the comments on separate clauses are intelligible and instructive, without being too long. Candidates for D.P.H. examinations will find it particularly welcome, especially those seeking for a Scottish diploma.

Hygiene for Health Visitors. By C. W. HUTT, M.A., B.C. Cantab., D.P.H. Oxon. Pp. xvi, 415. London: P. S. King & Son. 1912. Price 7s. 6d. net.—As a handbook of ready reference for the now rapidly-increasing class of social workers, qualified and voluntary, this volume will prove most useful. The subject-matter is well arranged, clearly illustrated, and embraces most topics of importance. The section dealing with the treatment of ophthalmia of the newly born might well have been placed in the chapter on the care of infants and young children. The sterilisation, rather than the boiling of milk, we think should be recommended for the infant, and we are doubtful as to the wisdom of giving a child who is being successfully breast-fed a midday bottle feed of cow's milk and water, merely to facilitate its weaning later on. A paragraph on the house fly and the danger arising from the spread of infection through its agency might appropriately be added to the chapter on the prevention of diseases. For those anxious to qualify as successful health visitors the book will be an indispensable *vade-mecum*.

On Gastroscopy. By WILLIAM HILL, B.Sc., M.D. Lond. Pp. vii, 46. London: John Bale, Sons & Danielsson, Ltd. 1912. Price, 3s. 6d. net.—This short monograph is an expansion of a paper read at the Birmingham Annual Meeting of the British Medical Association in 1911. It contains an account, copiously illustrated, of the evolution of the various present-day methods of gastroscopy, and particularly a description of the instruments elaborated by the author, in conjunction with Dr. George Herschell, for œsophago-gastroscopy by combined direct and indirect (periscopic) vision. Also the methods of using the latter instruments, the dangers to be avoided, and some of the successful observations made with them, are detailed. We cordially recommend a perusal of the work to all practitioners,

for the author makes it clear that valuable data for the diagnosis and treatment of gastric disorders are obtainable with a minimum of risk by the gastroscopic methods he describes.

Stomatology. By H. P. PICKERILL. London: Oxford Medical Publications. 1912. Price, 15s. —This book is intended to cover the field where general surgery and dentistry meet, and in that respect it meets a real need. It describes for the benefit of the medical man the deformities of the jaws, the causation, prevention and treatment of dental caries, the treatment of fractured jaw, and the dangers of oral sepsis. For those interested in the subject no better book can be recommended.

The Essentials of Food. By DONALD STEWART, M.D. London: John Bale, Sons & Danielsson, Ltd. 1911. Pp. vi, 182. Price, 3s. 6d. net.—The author of this small book attempts to give a " correct summary of present-day knowledge about foods " in language which can be understood by those who have no special scientific or medical training. The subject is a large one, and modern physiological chemistry is a difficult thing to put into untechnical language. Few men, indeed, except Huxley, have ever succeeded in the task of divesting a specialised science or scientific problem of its technicalities so that the uninformed can profit thereby. Dr. Stewart's attempt we cannot label a success. It is too evident that he has not sufficient knowledge of the subject at first hand to render his book of much value. He quotes many tables, and takes considerable pains to enforce certain precepts tending towards vegetarianism, but the language is often confusing and the statements inaccurate. He says, for example, that " concentrated preparations of animals " have " no value as nutritives," and refers the reader to an " analysis of these " (p. 31). On referring to p. 31 we find an analysis of eggs. He talks about a " gorged liver " and a " loaded tongue," about a " *preter*-natural accumulation of waste products," and on p. 13 he gives us the formula for " hair," which the reader will be glad to know is CHNOSuSi. The composition of sugar is CHO, and we are instructed that in the formula H_2O " the figure 2 under the H means not two ' atoms ' of the hydrogen, but two elements have to be taken with one of oxygen to form water." The physiologist is spoken of more with pity than anger. Of the digestion of milk he remarks, " There may be thus two bodies present in the stomach at the same time, and it is this combination that creates the misunderstanding in the minds of physiologists." What the state of mind of a physiologist might be after an ordinary dinner we tremble to think! The specific gravity of cow's milk is given as " 10.32 per cent.; whey—same." Such statements as this, " Proteid means that the

substance is of the highest value as a food, perhaps albumen comes next," show the nature of the book.

The reviewer, however, might forgive all this as a pleasant comic interlude; but when on p. 128 Dr. Stewart, speaking of alcohol, says, "In health it is so dangerous that like the devil in *Paradise Lost*, 'farthest from him is best,'" he feels that an apology is due to the shade of Milton for so bad a misquotation about one we had best treat with respect.

The Care of the Skin in Health. By W. ALLAN JAMIESON, M.D., F.R.C.P. Eng. Pp. 109. London: Henry Frowde, Hodder & Stoughton. 1912.—It is evident that this book is intended for readers outside the medical profession, and is couched in very general terms. So far as it goes it is excellent, there is much good advice on washing of the skin, bathing, and care of the hair and nails. In fact, it seems to represent a tentative excursion into fields which hitherto have been considered unworthy the serious attention of dermatologists, and the lawful province of beauty specialists, cosmetic quacks, and institutes of physical culture. We should like to see Dr. Jamieson bring his experience and knowledge rather more boldly into the lists, and claim "cosmetics" as a genuine branch of dermatology. The best way to abolish quackery is to excel the quacks in wisdom and understanding. The type from which this book is printed is exceptionally good, and makes very pleasant reading.

Extraction of Teeth. By J. H. GIBBS, F.R.C.S., L.D.S. Edin. Pp. 163. Edinburgh: E. & S. Livingstone. 1912. 7s. 6d. net. —This is an interesting book, expressing the views of the author, who considers that many of the orthodox methods of extracting teeth are wrong in principle and bad in practice. Mr. Gibbs describes his operative technique clearly and fully, and while there will be diverse opinions on many of the points raised, we are in accord with the author in his plea for the use of as few and simple forms of forceps as possible. There is a short but practical article on disinfection, and also on the choice of an anæsthetic for dental operations. The chapter on difficult extractions, which includes notes of many cases, and some good illustrations, is excellent. We commend this book to all who are interested in the subject.

An Historical Cutline of Ambulance from the Earliest Times. By C. H. MILES, L.R.C.P. (Lond.). Pp. 24. Bristol: John Wright & Sons Ltd. 1912. Price 3d.—Dr. Miles has published this brief historical account of ambulance work in the belief that it will add to the interest taken in this subject by members of "First Aid" and similar organisations. A few notable illustrations of military surgery in Homeric times combined

with a note on the methods of the Roman army suffice for antiquity; medieval times contribute two or three more examples of "the science of ambulance surgery" and lead up to a short description of the origin of the "Hospitallers of St. John of Jerusalem" and the ultimate development of the Order of the Hospital of St. John of Jerusalem in England. The only fault we have to find is that the history of so interesting a topic should be so aggravatingly short.

St. Bartholomew's Hospital Reports. Vol. XLVII. London: Smith, Elder, & Co. 1912. Subscription price 6s.—This year's reports have a sad note in that they record the death of three well-known late members of the staff, Langton, Power, and Gee. The appreciations by D'Arcy Power, W. H. Jessop, and Norman Moore are well written and give excellent portraits. Amongst the medical papers one by J. A. Nixon is especially worth reading, being a careful epitome of many cases of abdominal aneurysm. There is also an interesting thesis on "the causes of disease at sea in the Tudor and Stuart periods," by Alan Moore. McAdam Eccles contributes a fourth series of cases of Intussusception.

The Bristol Eye Dispensary, 1812–1912 (A Retrospect). By EDGAR A. PRICHARD. Pp. 20. Bristol: J. W. Arrowsmith Ltd. Price 3d.—Last year was the centenary of this institution, and to commemorate the event Mr. Prichard has written a small illustrated pamphlet giving an interesting history of the Charity since its foundation. The chief feature of the place is the Sunday morning clinic, which was established in order to avoid many poor patients losing a day's work; and the dispensary has been open every single Sunday since it was opened in September, 1812, and it has gone on quietly doing good work and receiving great numbers of patients now for a hundred years, and yet there are many who have scarcely even heard of it. It is probably the most economically run institution in the kingdom, and we think it well worthy of support.

An Operating Theatre in Private Practice. By C. HAMILTON WHITEFORD. Pp. 76. London: Harrison & Sons. 1912. Price 3s. 6d. net.—To those contemplating the building of a private operating theatre this book offers many useful hints. One doubts the advantages of the south aspect advocated, knowing how intolerable even a north light may become in hot weather, but it should certainly minimise the cost of heating, which in the theatre described is by electricity, and deserves special consideration, for if really efficient it is a marked improvement, from an aseptic point of view, on the radiators in common use. The author in his own case seems to have succeeded in producing a theatre which provides all the requirements demanded by modern aseptic technique.

Deuxième Congrès de l'Association Intérnationale d'Urologie. Londres. 24–28. Juillet, 1911. London: Adlard & Son. 1912. Price 10s. net.—In these proceedings will be found a most valuable collection of reports and discussions on the present position of the treatment of bladder growths. The ultimate results of prostatectomy are fully discussed, and it contains probably the best series of contributions on phosphaturia in the literature.

Manual for Women's Voluntary Aid Detachments. By P. C. GABBETT, Lt.-Col., I.M.S. Pp. 103. Bristol: John Wright & Sons Ltd. (N.D.). Price 1s. net.—This is a useful book, and a marked contrast to some already published on "First Aid." A careful study of it will make women's detachments a great boon to the sick and wounded in the time of war.

Guy's Hospital Reports. Edited by F. J. STEWARD, M.S., and HERBERT FRENCH, M.D. Vol. LXV. London: J. & A. Churchill. 1912.—The volume opens with a statistical paper on "The Outlook of Sufferers from Exophthalmic Goitre," by Dr. W. Hale White, giving the results of 124 cases of exophthalmic goitre met with in hospital and private practice, so as to try to form some opinion as to the outlook for sufferers from this disease. The result of the observations goes to indicate that the expected mortality of patients not operated upon is about twice as great as it should be according to the "Healthy Females Experience of Twenty British Offices amongst Assured Lives." Another paper on "The Operative Treatment of Exophthalmic Goitre," by L. Bromley, M.B., B.C., gives particulars of six cases of operation in the wards of Guy's Hospital, with two deaths and four recoveries. Mr. Bromley also gives an able summary of the advantages and risks of operation for this disease, pointing out that "operative treatment, in carefully selected cases, by an experienced operator is a justifiable proceeding," which seems rather to damn by faint praise. Perhaps the most interesting paper in the present volume is one by Arthur F. Hertz, M.A., M.D., etc., entitled "Neurological Studies," under which heading he writes on such subjects as The Tendo-Achilles Jerk, Babinski's Second Sign, Unilateral Musculo-Spiral Paralysis or Saturday Night Paralysis, etc. There is now at Guy's a Neurological Department, which must present a large field for observation, and evidently Dr. Hertz and others associated with him have taken full advantage of the opportunities afforded them to study these fascinating subjects. A prize essay of the Pupils' Physical Society, by Dr. Alexander Sandison, on "Rheumatic Fever in the Last Decade," gives a very complete *résumé* of recent advances in the study of acute rheumatism, and is

accompanied with an analysis of the cases admitted to Guy's Hospital during the period from 1900 to 1909, during which period we see the rise, growth, and to a certain extent the fall of the hypothesis of a specific micro-organism as the specific causal agent. The author truly says that among expert bacteriologists there is so much contradictory opinion that the inexpert, before pledging himself to any particular hypothesis, must be content to await future developments. Other notable papers in the present volume include one by Dr. A. S. Morton Palmer on "Observations on the Deep and Surface Temperatures of Man in Health and Disease," and one on "The Administration of Radium and its Derivatives with Reference to their Possible Application to Cancer," by Dr. E. Bellingham Smith and Mr. W. Wilson. Various lists of school appointments, prizes, etc., make up a volume of great interest to all old Guy's men.

A Surgical Treatment of Locomotor Ataxia. By L. N. DENSLOW, M.D. Pp. ix, 118. London: Baillière, Tindall and Cox. 1912.—Locomotor ataxia is considered to be due in most cases to a peripheral nerve irritation in the urethra in a subject whose nervous system has been rendered susceptible to injury by syphilis. Not only can strictures and granulating surfaces be discovered in the urethra of such patients, but on treatment of these conditions by dilatation and local applications the spinal symptoms are rapidly ameliorated. The number and variety of diseases which are mentioned as arising directly or indirectly from urethral irritation reminds one of that system of fanciful gynæcology which attributes most of the ills that female flesh is heir to to uterine displacements. Probably the one system of pathology and treatment deserves as little serious attention as the other.

Common Disorders and Diseases of Childhood. By G. F. STILL, M.A., M.D. Cantab. Second Edition. Pp. xiv, 813. London: Oxford Medical Publications. 1912.—The present reviewer in surveying the first edition of Dr. Still's book felt constrained to recommend it to every practitioner of medicine. It is an admirable superstructure of common sense, built up on the solid foundation of personal experience; a work of which British medicine may well be proud. Dr. Still has added several new chapters, and made important changes in some of the others. We note with interest that he thinks urotropin worthy of trial in the early stages of acute poliomyelitis, and that he regards the use of salvarsan in congenital syphilis as unnecessary and therefore unjustifiable. Of the new chapters, that dealing with tonsils and adenoids may be specially mentioned, although all of them are most interesting and instructive.

Cerebral Decompression in Ordinary Practice. By C. A. BALLANCE, M.V.O. Pp. 71. London: Macmillan and Co. Ltd. 1912.—The substance of this brochure was delivered at a meeting of the Bath and Bristol Branch of the British Medical Association in February, 1912. The author deals with the subject under two headings (*a*) Decompression for Injury; (*b*) Decompression for Disease. The value of decompression operations in preventing impending death from cerebral compression, or in preventing blindness from similar causes, is established, and though as the author shows one must not expect too much, on the other hand he makes it clear that in suitable cases the method is of undoubted utility.

Materia Medica and Therapeutics. By J. MITCHELL BRUCE, M.D., and WALTER J. DILLING, M.B. Ninth Edition. London: Cassell & Co. Ltd. 1912.—The first edition of "Mitchell Bruce" was published in 1884, and that and subsequent issues have served as a guide to vast numbers of medical students through the devious pathways of materia medica and allied subjects. The present and ninth edition is introduced jointly with Mr. Walter J. Dilling, M.B., Lecturer in Pharmacology at Aberdeen University. The subject-matter has been carefully revised, and notes on the more recently introduced synthetic remedies have been added. At the present time the study of physical chemistry has reached such a point that it cannot be ignored by students of medicine, and it is refreshing to notice that ionic medication is discussed—rather too briefly—but this is sufficient to indicate that materia medica is gradually being reformed and brought into line with modern thought. This progress is also evident when several pages of this work are seen to be devoted to notes on "Vaccine-Therapy."

There is room for improvement in one direction: it would be more convenient if the structures of many of the synthetic compounds were expressed "graphically," as the student can form far better mental pictures of the constitution of drugs when the formulæ are so represented. As a concise handbook for students and others we can safely recommend the work.

What to do in Cases of Poisoning. By WILLIAM MURRELL, M.D., F.R.C.P. Eleventh Edition. Pp. 283. London: H. K. Lewis. 1912.—The need for eleven editions in twenty-two years is sufficient to indicate the value of this little work. The last has been thoroughly revised, and many additions have been made, including the deadly veronal, the use of which has been enormously increased with frequent fatal results. It appears to have been overlooked and not included in the Schedule of Poisons Act, 1908, so that it is easily obtained without a prescription, is tasteless, and fairly soluble.

The Cause of Cancer, being Part III of "Protozoa and Disease." By J. JACKSON CLARKE, M.B., F.R.C.S. Pp. xi, 112. London: Baillière, Tindall & Cox. 1912.—Mr. Jackson Clarke has put into book form his views upon the relation of protozoa to disease. He recounts his experiences at the hand of the Morbid Growth Committee of the Pathological Society of London, and pleads for a fuller consideration of the hypothesis he advances. Although the protozoa are not deemed by many to play an important part in the ætiology of cancer, their capacity to act as irritants is universally recognised, and the author has the satisfaction that he has worked in a field which has yielded many surprises, and furnished the basis for much of our present-day therapy. It must be left to the future to determine whether the cancer cells or their inclusions are parasitic as the word is usually understood, but we cannot fail to recognise the persistence and perseverance which Mr. Clarke has shown in his work. To such persistence and enthusiasm Nature often yields her secrets.

The Pollution of Swimming Baths. By J. GRAHAM FORBES, M.D. Pp. 15. London: J. & A. Churchill. 1912.—The results of a bacteriological investigation of the water of one of the London County Council School Swimming Baths impressed the author with the evils and dangers lurking in swimming baths as a means of conveying infection. This brief paper discusses a subject of great importance, and the references to similar investigations by other observers add to its value. The author lends his support to Dr. Alexander's advocacy of sterilisation of swimming baths by the use of an electrolytic disinfecting fluid.

Wellcome Photographic Exposure Record and Diary. 1912. Pp. 280.—On comparing the copy for this year with that of 1911, we find that the changes are few, but the *Record* is so complete in every detail that the photographer can require that yearly changes are next to impossible. The set of standard pictures is, we think, a better one this year than in previous ones, and the list of plates and films has been brought up to date by the latest additions of the makers. This is the ninth year we have used the *Wellcome Record*, and we hope never to be without it.

The Illness and Death of Napoleon Bonaparte. By ARNOLD CHAPLIN, M.D. Cantab., F.R.C.P. Pp. 112. London: Hirschfield Brothers Limited. 1913. Price 2s. 6d.—This medical criticism of the illness and death adds one more essay of over a hundred pages to the voluminous literature of the life and death of the exile of St. Helena. Political

considerations were responsible for much of the misconception which arose as to the nature of the malady. The British Government on the one hand and the Emperor's *entourage* on the other were at such variance that the truth (lying somewhere near the mean) has been difficult to fathom. The facts now justify with tolerable certainty the opinion that the cancer which killed Napoleon was secondary to a chronic ulcer, from which he must have suffered for a considerable time, and in the edges of which it originated. From the medical standpoint it is easy to realise what the difficulties of diagnosis between chronic ulcer, simple or malignant, hepatitis, hypochondriasis, and climatic influences must have been. The oft-repeated statement that Napoleon Bonaparte must be classed as an epileptic appears to have absolutely no foundation.

Manual of Medicine. By A. S. WOODWARK, M.D., M.R.C.P. Pp. xi, 409. London: Oxford Medical Publications. 1912. 10s. 6d. net.—This is a "cram" book pure and simple, and one of the best of its kind. An enormous amount of information has been crowded into a very small space. The book should prove extremely useful to those revising their work previous to examinations, and will also appeal to the student just entering the medical wards, who is anxious to read up his cases. Leading features are the alphabetical arrangement of the infective fevers, and the indication in the table of contents of the relative importance of the subjects treated by the size of the type employed: in the latter connection it is somewhat astonishing to find appendicitis printed in the smallest tpye. The various causes of many leading *symptoms* are enumerated in lists. As a synopsis of the subject, the section on diseases of the nervous system is particularly good. Where so much compression has been attempted it is, perhaps, inevitable that some parts should strike a reader as unduly "thin." We think that in future editions the paragraph dealing with appendicitis, especially under the heading of "Operation," and that on tuberculous laryngitis might well be somewhat expanded.

Clinical Medicine. By JUDSON S. BURY, M.D., F.R.C.P. Edited by JUDSON S. BURY and ALBERT RAMSBOTTOM, M.D. Third Edition. Pp. xxi, 530. Ten plates. London: Chas. Griffin & Co. 1912. 17s. 6d. net.—The third edition of this well-known book has been revised, and many additions and alterations made to render it more useful. It may be recommended as a trustworthy guide and a useful aid to clinical work. There is an excellent and well-illustrated section on the examination of the thoracic and abdominal organs by the Röntgen Rays, a subject of rapidly-growing importance. We can also commend the section on skin diseases. The book

is very complete, clear and well written, and the illustrations numerous and helpful. Any criticisms we have to offer are of a minor character: thus, in taking a culture from the blood there is no need to use the piston of a glass syringe, as if the needle is in the vein the blood will flow into it, also a little 0.5% citrate of soda solution in the syringe prevents too rapid coagulation. The plates representing blood films are good, except that the colours of the nuclei do not exactly represent that produced by Leishman's stain. We think that the lying instead of the sitting posture of the patient should be advised for lumbar puncture, because so many patients in whom it is required cannot sit up. The temperature variations in apoplectic seizures should be given. On looking up the reference to Wassermann's test in the index we could not find it on the page indicated, nor could we find any description of this test. Lastly, we could not find any account of the newer tests in the diagnosis of vertigo. We mention these points in the interests of the future editions which we hope will reward the author's well-directed labours.

Pye's Surgical Handicraft. Edited and largely rewritten by W. H. CLAYTON-GREENE, B.A., M.B., B.C., F.R.C.S. Sixth Edition. Bristol: John Wright & Sons Ltd. 1912. 12s. 6d. net.—In its present form this work is one of the most practical books on minor surgery. It has been largely rewritten, and considerable care appears to have been exercised in bringing it up to date. It can be thoroughly recommended for general practitioners, dressers, and the immature house surgeon.

Notes on Preparations for the Sick.

Glycero-Phosphates: Rubelix.—H. E. MATTHEWS & Co., Clifton.—This new glycero-phosphate compound is a palatable liqueur, free from sugar, but having a similar composition to the usual glycero-phosphate syrups. Each ounce contains one-sixteenth of a grain of strychnine, and half a grain of quinine. The dose is a teaspoonful, increased to a table-spoonful, to be taken alone or with water, as desired. It is a clear red fluid, which does not precipitate on dilution. It has a slight chalybeate and bitter taste, and its composition should endow it with the usual tonic properties of this class of compound.

"Tabloid" Thyroid Gland, gr. $\frac{1}{10}$ and gr. $\frac{1}{4}$.—BURROUGHS, WELLCOME & Co., London.—In thyroid medication the dose of thyroid gland has usually been regarded as 3 to 10 grains. Recently, however, certain authorities have stated that as the result of extensive clinical trials they have found doses of gr. $\frac{1}{10}$ to gr. 1 equally satisfactory. To provide for this new system of dosage two additional strengths—gr. $\frac{1}{10}$ and gr. $\frac{1}{4}$— of "Tabloid" Thyroid Gland have been issued. A large number of the most brilliant results recorded in the literature of thyroid therapy have been obtained with "Tabloid" Thyroid Gland, which has been proved to be an exceedingly active and reliable preparation. It is standardised by chemical means, so as to ensure that the desiccated gland substance, of which each product represents a definite amount, contains not less than 0.2 per cent. of iodine in organic combination.

The strengths in which "Tabloid" Thyroid Gland is issued now include gr. $\frac{1}{10}$, gr. $\frac{1}{4}$, gr. $\frac{1}{2}$, gr. 1, gr. $1\frac{1}{2}$, gr. $2\frac{1}{2}$, gr. 5, 0.05 gramme, 0.1 gramme, and 0.3 gramme.

Tuberculin Bouillon Filtrate, Human (T.O.A.). Tuberculin Bouillon Filtrate, Bovine (P.T.O.).—BURROUGHS, WELLCOME & Co., London.—Two new preparations have been added to the list of "Wellcome" Brand Tuberculins. Each is issued in hermetically-sealed phials of 1 c.c., both undiluted, and in dilutions representing 0.0001 c.c., 0.001 c.c., 0.01 c.c., and 0.1 c.c of T.O.A. or P.T.O. The undiluted preparations are for the use of practitioners who prefer to make their own dilutions. The bouillon filtrates T.O.A. and P.T.O. were the earliest tuberculins prepared, though not the first introduced into therapeutics. Being the weakest of all the tuberculins, they are now employed by many workers to initiate a course of tuberculin treatment according to the intensive system of dosage, the use of which has of late become so widespread.

Bolus Soap.—LIERMANN, Actien-Gesellschaft für Anilin-Fabrication, Berlin.—This aseptic Bolus washing paste is intended for cleansing the hands before and after surgical procedures. It is a soft, paste-like substance, containing clay in the form of Bolus alba, which serves the part of a nail brush, and cleanses far more quickly. It is slightly scented, and is mounted in tubes ready for use. It is claimed that the Bolus method, applied for three minutes, leaves the hands practically free from germs, and the hands prepared by this method, and covered with rubber gloves, were found to be free from germs three hours later.

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the List in December.

February 28th, 1913.

J. Paul Bush, C.M.G. (1) .. .. 2 volumes.
C. Elliott, M.D. .. .. 4 ,,
The Editor of *The Medical Officer* (2) .. .. 2 ,,
The Surgeon-General, United States Army (3) .. 1 ,,
J. Taylor (4) .. .. 3 ,,

A framed picture has been presented by Mr. James Taylor.

EIGHTY-SEVENTH LIST OF BOOKS.

The titles of books mentioned in previous lists are not repeated.

The figures in brackets refer to the figures after the names of the donors, and show by whom the volumes were presented. The books to which no figures are attached have either been bought from the Library Fund or received through the *Journal*.

Ach, A. .. .. .. *Beiträge zur Oesophagus-Chirurgie* 1913
Allen, R. W. .. .. *Vaccine Therapy* .. .. 4th Ed. 1912
„ „ .. .. *Bacterial Diseases of Respiration* 1913
Archibald, A. Balfour and R. G. *Second Review of Recent Advances in Tropical Medicine* .. .. (4) 1911
Balfour and R. G. Archibald, A. *Second Review of Recent Advances in Tropical Medicine* .. .. (4) 1911
Beatson, Sir G. T. .. *Modern Wound Treatment* 1913
Besche, A. de .. *Bakteriologiscke Studier over Barnetuberkulose* 1912
Bidwell, L. A. .. *Minor Surgery* .. .. 2nd Ed. [1912]
Bolduan, C. F. .. *Immune Sera* .. .. 4th Ed. 1911
Borradaile, L. A. *Elementary Zoology* .. .. [1912]
Cammidge, P. J. .. *Glycosuria and Allied Conditions* 1913
Carling, W. Turner and E. R. *Treatment after Operation* .. .. [1912]
Catalogue (Index-) of the Surgeon-General's Office, United States Army (3) 2nd Series, Vol. XVII 1912
Chaplin, A. .. .. *Illness and Death of Napoleon Bonaparte* .. 1913
Craig, C. F. .. .. *The Parasitic Amœbæ of Man* 1911
Crookshank, F. G. *Flatulence and Shock* 1912
Cushing, H. .. .. *The Pituitary Body and its Disorders* .. .. [1912]
Daniels, C. W. .. *Tropical Medicine and Hygiene.* Part III 1912
Elliot, R. H. .. *Sclero-corneal Trephining in Glaucoma* .. .. [N.D.]
Evans, W. .. .. *Diseases of the Skin* .. .. [1912]
Flexner, A. .. .. *Medical Education in Europe* .. .. (1) 1912
Fuchs, E. .. .. *Text-Book of Ophthalmology* (Trans. from 12th German Edition by A. Duane) 4th Ed. 1911
Goodall, G. L. Gulland and A. *The Blood* 1912

Gulland and A. Goodall, G. L.	*The Blood*	1912
Herman, G. E.	*Diseases of Women.* Revised (4th) Edition by the Author, assisted by R. D. Maxwell	1913
Hurry, J. B.	*Vicious Circles in Disease* .. 2nd Ed.	1913
Laird, J.	*Notes on the Treatment of Tuberculosis*	1912
Leftwich, R. W.	*Tabular Diagnosis*	1913
Mackie, F. P.	*Sleeping Sickness*	1912
Macleod, J. J. R.	*Diabetes: its Pathological Physiology*	1913
Marshall, C. D.	*Diseases of the Eyes*	[1912]
Moon, R. O.	*Prognosis and Treatment of Diseases of the Heart*	1912
Moore, N.	*The History of the Study of Medicine in the British Isles*	1908
Moullin, C. M.	*The Biology of Tumours*	1913
Nisbet, J. F.	*The Insanity of Genius* .. 6th Ed.	1912
Simon, C. E.	*Clinical Diagnosis* .. 7th Ed.	1911
Stephenson, S.	*Eye-Strain in Everyday Practice*	1913
Turner and E. R. Carling, W.	*Treatment after Operation*	[1912]
Whipham, T. R. C.	*Medical Diseases of Children*	[1912]

TRANSACTIONS, REPORTS, JOURNALS, &c.

American Journal of Obstetrics, The	Vol. LXVI	1912
American Journal of the Medical Sciences, The	Vol. CXLIV	1912
American Laryngological Association, Transactions of the		1912
American Ophthalmological Society, Transactions of the	Vol. XIII, Part I	1912
American Surgical Association, Transactions of the	Vol. XXX	1912
Archiv für klinische Chirurgie	Bd. XCVIII	1912
Bristol Medico-Chirurgical Journal, The	Vol. XXX	1912
British Journal of Children's Diseases, The	Vol. IX	1912
British Medical Journal, The	Vol. II for	1912
Congrès de la Société internationale de Chirurgie, 3me	(1)	1911
Deutsche Zeitschrift für Chirurgie	Bd. CXVIII	1912
Edinburgh Medical Journal	N.S., Vol. IX	1912
Gazette hebdomadaire des Sciences médicales de Bordeaux	Tom. XXXIII	1912
Glasgow Medical Journal, The	Vol. LXXVIII	1912
Hazell's Annual		1913
Hospital, The	Vol. LII	1912
Hospitals—		
Guy's Hospital Reports	Vol. LXVI	1912
Journal of Mental Science, The	Vol. LVIII	1912
Journal of Vaccine Therapy, The	Vol. I	1912
Lancet, The	Vol. II for	1912
Medical Directory, The		1913
Medical Officer, The	(2) Vols. VII, VIII	1912
Medical Press and Circular, The	[Vol. CXLV]	1912
Medical Review, The	Vol. XV	1912

Nordiskt medicinskt Arkiv—Inre medicin	Bd. XLIV	1911
Ophthalmological Transactions	Vol. XXXII	1912
Pellagra Commission of the State of Illinois, Report of the		1912
Practitioner, The	[Vol. LXXXIX]	1912
Prescriber, The	Vol. VI	1912
Progressive Medicine	Vols. III, IV	1912
Quarterly Journal of Medicine, The	Vol. V	1911–12
Revue hebdomadaire de Laryngologie ..	Tom. XXXIII, Vol. II	1912
Royal Society of Medicine, Proceedings of the	Vol. V	1912
St. Petersburger medizinische Wochenschrift		1911
Surgery, Gynecology and Obstetrics	Vol. XV	1912
Verhandlungen der deutschen Gesellschaft für Urologie		1911
Wellcome Research Laboratories, Fourth Report of	(4)	1911
West London Medical Journal	Vol. XVII	1912
Whitaker's Almanac		1913
Zeitschrift für Urologie	Bd. VI	1912
Zentralblatt für Chirurgie	Bd. II for	1912
Zentralblatt für Gynäkologie	Bd. II for	1912
Zentralblatt für innere medizin	Bd. II for	1912

MEETINGS OF SOCIETIES.

Bristol Medico-Chirurgical Society.

December 11th, 1912.

Dr. WALTER C. SWAYNE, President, in the Chair.

The following demonstrations of clinical methods were given and specimens shown:—**Bronchoscopy and Œsophagoscopy,** by Dr. WATSON-WILLIAMS and Mr. A. J. WRIGHT; **Intravenous Ether Anæsthesia,** by Mr. A. L. FLEMMING; **Intestinal Skiagraphy with Bismuth Meal,** by Mr. F. G. BERGIN; **Gastroscopy,** by Dr. STACK; **The Polariscope,** by Dr. J. A. NIXON; **Naso-Pharyngoscopy,** by Dr. WATSON-WILLIAMS and Mr. A. J. WRIGHT; **Carbon Dioxide Estimation in the Blood** and **Solid Carbon Dioxide Treatment of Nævi,** by Dr. A. RENDLE SHORT; **Urinary Acidosis estimation,** by Dr. R. S. S. STATHAM; **Skiagrams,** by Dr. J. TAYLOR; **Pathological Specimens,** by Professor WALKER HALL, Dr. SCOTT WILLIAMSON, Dr. KAY-MOUAT and others.

January 8th, 1913.

Dr. WALTER C. SWAYNE, President, in the Chair.

Dr. J. A. NIXON gave a demonstration on the technique of the **Intravenous administration of neo-salvarsan.** (See p. 24.)

Dr. C. W. J. BRASHER, in a paper on **Intermittent swelling of the parotid gland,** related the case of an adult female who had had attacks of acute parotid swelling at intervals for more than ten years. A vaccine of the *Micrococcus catarrhalis* grown from the interior of Stenson's duct gave a year of freedom from attacks, but the condition had since recurred.—Dr. J. O. SYMES said that he had seen a boy with bilateral parotid swelling occurring every evening for some weeks following an attack of mumps, and Dr. CAREY COOMBS said that he had seen a similar condition affecting the submaxillary glands.

Dr. R. S. S. STATHAM showed a specimen of primary **Rupture of the pregnant uterus before labour.** When the patient, who was eight months pregnant, was first seen it was thought to be a case of concealed accidental hemorrhage, but laparotomy revealed an extensive rupture of the uterus and the child free in the peritoneal cavity. She had been curetted a year previously for a septic abortion, and no other cause could be found.

Dr. F. H. EDGEWORTH related a case in which **Phosphaturia and oxaluria** alternated. (See p. 18.)—Dr. BRASHER mentioned a case of oxaluria accompanied by hæmaturia and renal colic. (See p. 21.)

February 12th, 1913.

Dr. WALTER C. SWAYNE, President, in the Chair.

The meeting was devoted to a discussion on the **Treatment of chronic constipation.** The discussion was opened by Dr. F. H. EDGEWORTH (see p. 40) and Mr. T. CARWARDINE.

J. LACY FIRTH.

A. J. WRIGHT, *Hon. Sec.*

Obituary Notice.

JAMES WILLIAMS ARROWSMITH.

WHEN thirty years ago Mr. Greig Smith and Mr. L. M. Griffiths were arranging for the establishment of a Journal of the Medical Sciences for the West of England and South Wales, they naturally appealed to Mr. Arrowsmith, the publisher of Mr. Greig Smith's pioneer work on *Abdominal Surgery.* He at once saw the wisdom of their proposal, and gave every possible assistance and advice as to the details of the business part of the undertaking.

The Medico-Chirurgical Society undertook the financial

responsibility, and the *Journal* then established has continued to run a prosperous course, bringing during its early years a fairly large profit, which was reserved, and afterwards devoted to the formation of the Medical Library.

It is due to our late publisher, who died on January 19th, in his seventy-fourth year, to state that he was always greatly interested in the welfare of the *Journal*, and anxious for its success. We were fortunate in obtaining the assistance of one whose whole heart was in the work.

The address given by the Rev. Dr. Glover at the funeral on January 23rd brought out the many-sided character of Mr. Arrowsmith's life, which appeared to include in one personality the lives of three or four different men. The many sides have been commented on by the usual Press notices, but there is one which has been left us to indicate, and we make no apology for a short eulogy of one who did so much for the medical profession, and was so largely concerned in the establishment of our *Journal*. For many years he was an active supporter of the University College, with which was affiliated and afterwards incorporated the old Bristol Medical School. He shared with the medical staff in the feeling that the Bristol student was not quite fairly treated, and could not be until a Bristol University became something more than an aspiration or a dream of the future. How he worked towards the attainment of this end is well known to all men, and his perseverance was at last rewarded by the establishment of what had been for many years the highest aim of his ambition. The medical profession is greatly indebted to him for the fact that the Bristol student is now no longer at any disadvantage in obtaining a University degree on similar terms to those which exist elsewhere.

Local Medical Notes.

The following are recent examination results:—

UNIVERSITY OF BRISTOL.—*M.B., Ch.B.:* Kathleen M. Cole, B. C. Eskell, A. G. Hieber. *D.P.H.:* W. Pomeroy, W. Bainbridge, S. N. Tiwary; *Part I*, P. Moxey; *Part II*, A. H. Finch.

UNIVERSITY OF LONDON.—*M.B., B.S. Group II:* E. W. Wade, F. W. Clemens.

CONJOINT EXAMINING BOARD OF ENGLAND. — *Final Examination — Medicine:* C. Kingston, G. S. Applegate.* *Midwifery:* H. B. Logan, L. Page.* *Surgery:* L. Page.*

* Denotes qualification.

University of Bristol.—Mr. George A. Wills and Mr. Henry H. Wills have jointly given £150,000 towards the erection of a new building fronting Queen's Road, on the site of the old Blind Asylum. It is understood that £20,000 of this will be reserved for endowment of the building. Mr. W. Melville Wills has also given £20,000 in augmentation of the General Endowment Fund of the University. The gifts are made by the three brothers in memory of their father, the late H. Overton Wills, who was the first Chancellor. The main features of the structure will be a magnificent tower nearly 200 feet high. In the new buildings will be housed the Arts Library and the Medical Library, together with offices for the administrative staff and a large Assembly Hall. It is hoped to commence the work in the spring of next year and to complete the structure in 1917.

An Historical Medical Exhibition in London.—In connection with the International Medical Congress to be held this summer in London, an exhibition of rare and curious objects relating to medicine, chemistry, pharmacy and the allied sciences is being organised by Mr. Henry S. Wellcome.

Among other interesting sections is one including the medical deities of savage, barbaric and other primitive peoples. Through the kindness of friends, specimens of these have been forwarded from all parts of the globe, but there are still many gaps to be filled, and those who possess such objects and would be willing to loan them should communicate with the Secretary of the Exhibition, whose address is given below.

Amulets, talismans and charms connected with the art of healing will also form another prominent feature, and any loans of this description would be welcomed.

In the section of surgery an endeavour will be made to trace the evolution and development of the chief instruments in use at the present day, and it is desired to accumulate specimens of instruments used in every part of the world by both savage and civilised peoples.

A complete illustrated syllabus will be forwarded to anyone interested on application to the Secretary, 54A Wigmore Street, London, W.

APPOINTMENTS.

Bristol Royal Infirmary.—The following appointments have been made:—J. Paul Bush, C.M.G., M.Ch., to be Honorary Consulting Surgeon. E. H. E. Stack, M.B., B.C. Cantab., F.R.C.S., to be Honorary Surgeon. A. Rendle Short, M.D., B.Sc. Lond., F.R.C.S., to be Honorary Assistant Surgeon. G. I. Strachan, M.B., Ch.B. Glasgow, to be House Physician.